

Manufacturers Record

Exponent of America

AUGUST 26, 1920.

Volume LXXVIII

Table of Contents

Number 9

An Unprecedented Abuse of Financial Power.....Cover Page

EDITORIALS 81-96

The Federal Reserve Board Helps to Break Cotton Prices.
The Amazing Earnings of the Federal Reserve Banks.
Fighting the South as Always.
Our Government's Opportunity in Mexico.
Some Political Straws.
Was It Necessary to Go Back to the Law of the Jungle in Transportation?
The Pillage of the Farmer.
Cotton Growers Demand a Protective Tariff.
The League War.
The Amazing Effort of League Advocates to Win Favor by Declaring that the Covenant Does Not Do What the President Has Declared It Does Do.
More than a Political Bugaboo.
A Clear-Cut Statement for the Open Shop.

Shipping Board Will Not Sell Ships Now Allocated to Operating Southern Lines.
The Dye Industry Essential to Our Safety.
Important, but Not True.
For National Good-Will.
Cotton Farmers Now in Toils of Deflation Move.
A Fair Statement of the Rights of Labor by Senator Harding.
Hard Times by Edict to Be Overcome Finally by Irresistible Forces.
The South Faces the Battle of the Years in Cotton Prices This Fall.
General Pershing Answers the Absurd Contention that the Armistice Was a Godsend to the Allies.
Practical Move to Immediately Increase Transportation Efficiency.

NEWS ARTICLES

Some Opinions on Federal Reserve Policy of Deflating Business..... 97
A Minister's Reasons for Opposing the League of Nations.....By Joseph Judson Taylor, D.D. 99
Protective Tariff Strongly Favored by Tobacco and Peanut Growers of Virginia and North Carolina.. 101
Drastic Reduction in Cotton Acreage Proposed..... 101
Southern Ports to Profit from Shipping Board Policy.....By Albert J. Stowe 103
The Rise, Decline and Rebirth of Hopewell, Va..... 105
Louisville's Present Industrial Development Said to Be Greatest in Its History and Due in Large Measure to Prohibition..... 108
Herbert Spencer's Opposition to the Metric System.....By A. V. Draper 109
Why Westinghouse Does Not Use the Metric System..... 111
Large Tracts of Cut-Over Timber Land in Mississippi Valley to Be Converted Into Small Farms..... 113
By C. E. Collins
An Agricultural Excursion to the Southeast.....By C. A. Whittle 114
An Adequate Supply of Pulp-Wood for the United States Claimed for Our Pacific Coast..... 115
Production of Pig-Iron in the United States in the First Half of 1920..... 117
Lake Superior's Decreasing Iron Ore Reserves vs. Abundant Stores of the South.....By Y. A. Dyer 118
How Los Angeles Became a Cotton Export Port.....By Crittenden Marriott 119
"The Age of Advertisement and the Real Meaning of Advertising".....By George Batten Company 123
Coal and Coke Production Show Increase..... 124
Adding to Texas' Wealth by Irrigation..... 124

DEPARTMENTS

The Iron and Steel Situation..... 125	Foreign Needs..... 130
Railroads..... 127	Construction News..... 131
Textile..... 127	Industrial News..... 146
Mechanical..... 128	New Financial Corporations..... 148
Commendations, Kicks and Comments..... 130	New Securities..... 148

PUBLISHED EVERY THURSDAY BY THE

MANUFACTURERS RECORD PUBLISHING CO., BALTIMORE, MD.

Branch Offices: New York, 30 Church St.; Chicago, 11 South La Salle St.; Boston, 734 Old South Bldg.; St. Louis, 915 Olive St.
Washington, Whaley-Eaton Service, 456-459 Munsey Building.

SUBSCRIPTION RATES

\$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada, add postage \$2 a year. For other foreign countries, add postage \$3.50 a year.
Back numbers, if available and not over one month old, 20 cents each. From one month to six months old, 50 cents each; over six months old, \$1 each.
In ordering change of address, give old as well as new address.

MEMBER ASSOCIATED BUSINESS PAPERS, INC., AND AUDIT BUREAU OF CIRCULATIONS.

NORTHROP LOOMS

TRADE-MARK

Make better goods and more of them with less than half the labor cost of weaving.

Draper Corporation

Hopedale Massachusetts

PROTECT YOUR INCOME AT THE SOURCE

Stop Pay Roll Leaks with
SIMPLEX TIME RECORDER

Prevent Fires with
HARDINGE WATCHMAN'S CLOCK

Write for FREE BOOKS

L. P. LATHEM

527 Candler Bldg. - - ATLANTA, GA.

B. & B. WIRE ROPE

Safe and sound all the way through. You can depend upon it absolutely and always.

Broderick & Bascom Rope Co.
ST. LOUIS, MO.

Mfrs. of Celebrated Yellow
Strand Wire Rope



PROTECT YOUR INCOME AT THE SOURCE

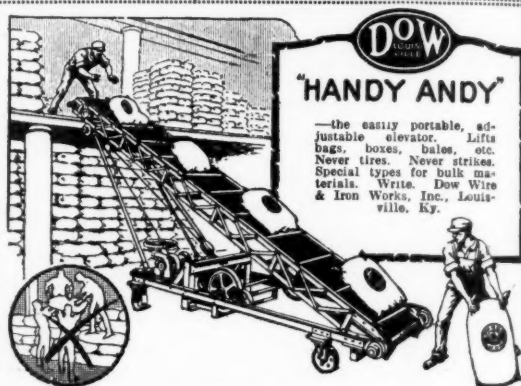
Stop Pay Roll Leaks with
SIMPLEX TIME RECORDER

Prevent Fires with
HARDINGE WATCHMAN'S CLOCK

Write for FREE BOOKS

L. P. LATHEM

527 Candler Bldg. - - ATLANTA, GA.



DUXBAK
Waterproof
Leather
Belting



Chas. A. Schieren Company
ESTABLISHED 1868
Tanners and
Belt Manufacturer

26 FERRY ST., NEW YORK

Always Leads in Tests of
Quality, Endurance and Satisfactory Service

ALLEN BALL BEARING SPINDLES

FOR
TWISTER FRAMES
ARE
INDISPENSABLE

**Save Power — Increase Production
Uniform Twist**

Write for literature

ALLEN SPINDLE CORPORATION

80 Boylston Street
BOSTON, MASSACHUSETTS

NICHOLSON FILES

The Files that cut the Smoothest—a File for every purpose.

Send for File Philosophy—a fifty years' Education in Files and Filing in one hour.

NICHOLSON FILE CO.

Providence, Rhode Island, U. S. A.



KINNEAR ROLLING AND BIFOLDING DOORS

— OF —

STEEL AND WOOD

Complete Labeled Service

Our engineering Dept. will submit plans and specifications. Write today for catalogue

THE KINNEAR MFG. CO.

823-873 Field Ave.
COLUMBUS, OHIO, U. S. A.



Manufacturers Record

EXPONENT OF AMERICA

Devoted to the Upbuilding of the Nation Through the Development
of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

Vol. LXXVIII, No. 9
WEEKLY

BALTIMORE, AUGUST 26, 1920

{ SINGLE COPIES, 20 CENTS.
\$6.50 A YEAR

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.
Office: Manufacturers Record Building, Cor. Commerce and Water Sts.
BALTIMORE, MARYLAND

RICHARD H. EDMONDS, President
FRANK GOULD, Vice-President
VICTOR H. POWER, Treasurer
I. S. FIELD, Secretary
RICHARD H. EDMONDS, Editor

BRANCH OFFICES:
CHICAGO, 11 So. La Salle St.
ST. LOUIS, 915 Olive St.
WASHINGTON (Whaley-Eaton Service), 456-459 Munsey Bldg.
NEW YORK, 30 Church St.
BOSTON, 734 Old South Bldg.

SUBSCRIPTION RATES:
\$6.50 a year (in advance); six months, \$3.50; three months, \$2 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada, add postage \$2 a year. For other foreign countries add postage \$5.50 a year. Back numbers, if available and not over one month old, 20 cents each. From one month to six months old, 50 cents each; over six months old, \$1 each. In ordering change of address, give old as well as new address.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

WHO WILL CONFESS?

IN every direction men who have been rampantly demanding the League of Nations without reservation are now crawling and are saying we must have a League of Nations. It is a pitiful subterfuge for men who have been denouncing Senators and others who fought for a League of Nations, a league which would protect American sovereignty, now to be parading their demand for a league without the manliness and the moral courage to admit their change of heart and to withdraw the bitter criticisms which they hurled at Lodge and others who were always ready for a league, notwithstanding Mr. Wilson's demand that it should be his league or nothing. How many who have changed from the league to a league will be fair and square enough to say so publicly?

THE FEDERAL RESERVE BOARD HELPS TO BREAK COTTON PRICES.

THE Texas Department of Agriculture, in an official statement to the farmers of that State urging them to hold their cotton, says:

"The actions of the Reserve Bank Board caused banks to call loans on cotton which forced it to sell, thus adding to the scheme to depress the price."

It was very evident from the day the Federal Reserve Board began its campaign to force banks to curtail credit that cotton would be made to suffer and that cotton growers would be forced by the Reserve Board's unwise action to suffer enormous losses. What we constantly said all through last winter about the disastrous effects of the Board's work is now being realized on every farm and in every factory in America.

THE AMAZING EARNINGS OF THE FEDERAL RESERVE BANKS.

IN view of the enormous net earnings of the Federal Reserve Banks of the country, a criticism by a member of that Board, Mr. John Skelton Williams, Comptroller of the Currency, against New York banks for high rates of interest seems somewhat of a joke. We do not undertake to defend the New York banks. They may have charged entirely too much and may deserve his castigation. Bankers of the entire country are charging his rates of interest, but the Federal Reserve Board has set them the example.

The report of the earnings of the Federal Reserve Banks of the country for the six months ended, June 30, as officially furnished by the Board in an advance copy of its bulletin, shows the following amazing annual rate of earnings by the different branch Federal Reserve Banks:

RATIO OF CURRENT NET EARNINGS TO AVERAGE PAID-IN CAPITAL.

	Per cent.
Boston	127.0
New York	203.6
Philadelphia	121.8
Cleveland	109.1
Richmond	113.6
Atlanta	151.5
Chicago	173.7
St. Louis	121.4
Minneapolis	118.0
Kansas City	128.1
Dallas	83.5
San Francisco	156.8
Total average	151.2

Thus the earnings for the first six months of the year showed an average for the entire system of a rate equal to 151.2 per cent per year, New York leading with 203.6 per cent, the lowest in the list being Dallas with 83.5 per cent, Cleveland with 109.1 per cent being next to the lowest in the entire list. Comment seems superfluous.

It is true that a large proportion of these earnings go into the Treasury Department, but that only shows that the Government is profiteering to an unheard of extent in making money out of its banking operations at a rate which would put to shame any private banking institution in the country. Some banks having accumulated large surplus through a long period of years, are able to show very heavy earnings in proportion to capital, but their earnings are made on surplus as well as on actual capital. But we doubt if any twelve banks in the United States can be found which will show such a remarkable percentage of earnings as at the rate of 151.2 per cent per year, which is shown as the rate of earnings of the twelve Federal Banks.

The Government has no more right to profiteer than the

Earnings and Expenses of Each Federal Reserve Bank for the Six Months Ending June 30, 1920.

EARNINGS.

	Boston.	New York.	Philadelphia.	Cleveland.	Richmond.	Atlanta.	Chicago.	St. Louis.	Minneapolis.	Kansas City.	Dallas.	San Francisco.	Total.
Discounted bills.....	\$1,406,423	\$2,120,722	\$5,417,649	\$4,367,998	\$2,681,248	\$2,584,646	\$10,556,549	\$2,821,065	\$1,858,260	\$2,946,393	\$1,817,658	\$3,300,769	\$64,329,370
Purchased bills.....	768,291	5,097,132	119,357	1,694,833	288,461	253,363	1,754,368	212,929	137,747	123,425	55,802	2,229,694	12,754,492
United States securities.....	297,877	981,798	351,268	277,369	139,122	189,367	953,343	494,961	94,631	273,868	140,092	104,815	3,519,091
Transfers, net earnings.....	21,618	78,374	34,586	39,912	.....	.....	161,468	.....	1,360	1,360	15,656	55,646	135,646
Deficient reserve penalties (including interest).....	4,077	58,582	13,265	49,881	100,664	4,169	15,065	15,065	35,752	85,392	35,271	58,646	443,286
Sundry profits.....	.....	.....	.....	606	645	13,138	5,522	11,748	7,385	128	165	39	114,176
Total earnings.....	\$6,488,886	\$27,336,778	\$5,936,155	\$6,429,589	\$3,219,518	\$3,334,673	\$13,051,329	\$4,287,758	\$2,354,172	\$3,427,396	\$2,179,049	\$5,834,579	\$81,778,372

*Debit.

CURRENT EXPENSES.

	Boston.	New York.	Philadelphia.	Cleveland.	Richmond.	Atlanta.	Chicago.	St. Louis.	Minneapolis.	Kansas City.	Dallas.	San Francisco.	Total.
Expenses of operation:													
Assessments, account expenses of Federal Reserve Board.....	\$38,666	\$168,682	\$41,828	\$46,555	\$25,531	\$20,302	\$66,764	\$19,520	\$16,607	\$25,329	\$16,167	\$33,306	\$519,257
Federal Advisory Council (fees and travelling expenses).....	252	700	297	767	380	607	617	600	415	260	400	939	6,234
Governors' conferences (including travelling expenses).....	147	112	122	109	214	243	233	109	141	484	391	878	3,483
Federal Reserve Agents' conferences (including travelling expenses).....	140	375	.....	68	.....	.....	.....	.....	.....	.....	.....	689	1,252
Salaries—													
Bank officers.....	58,450	177,731	60,010	71,907	43,135	77,572	106,835	57,100	33,755	48,788	55,125	91,976	881,384
Clerical staff.....	349,225	1,708,367	374,221	331,533	206,510	266,446	711,580	277,427	168,719	305,242	297,783	498,422	5,463,312
Special agents.....	8,412	27,114	4,084	13,400	6,278	18,787	6,824	9,429	6,824	12,957	7,489	13,609	73,379
All other.....	3,946	75,533	40,645	48,834	13,928	10,613	53,485	12,429	7,146	12,570	15,496	16,213	313,771
Life insurance premiums (employees' group insurance).....	480	12,493	6,746	6,267	2,519	1,322	7,927	3,150	1,694	7,138	2,812	8,263	60,211
Directors' fees.....	2,300	11,890	2,290	1,610	1,745	1,786	2,420	3,215	1,970	3,340	1,290	3,180	36,865
Per diem allowances.....	1,267	.....	550	460	350	2,385	510	320	330	3,710	445	418	11,275
Travelling expenses.....	926	2,264	722	950	698	2,663	510	1,680	819	2,534	1,390	939	17,426
Officers' and clerks' travelling expenses.....	5,235	8,362	2,702	8,787	9,043	6,955	18,764	14,783	6,809	11,081	13,453	13,453	122,644
Legal fees.....	1,923	8,324	1,272	570	1,328	3,750	1,590	1,590	1,375	1,590	1,250	1,960	25,352
Rent.....	32,422	144,168	8,180	4,132	9,190	68,211	68,211	22,607	9,129	19,633	7,451	6,853	361,385
Taxes and fire insurance.....	963	552	822	1,586	829	1,707	1,097	1,097	32	2,074	4,390	4,390	28,326
Telephone.....	5,512	17,389	7,521	11,943	8,474	3,055	3,055	3,055	3,055	3,055	3,055	3,055	19,000
Postage.....	3,938	21,336	11,946	11,946	23,144	23,144	23,144	23,144	23,144	23,144	23,144	23,144	190,000
Expressage.....	31,669	54,104	26,148	35,507	29,404	24,462	58,123	40,393	28,031	35,127	32,468	37,883	455,516
Insurance and premiums on fidelity bonds.....	.....	2,116	396	704	573	954	5,282	1,032	643	1,085	18,548	2,684	40,689
Light, heat and power.....	3,607	13,738	31,694	22,489	1,838	12,315	32,133	10,789	9,628	19,870	3,765	22,763	183,709
Printing and stationery.....	7,634	1,279	9,985	2,617	3,765	3,237	10,825	3,121	.....	2,753	2,607	4,415	52,258
Repairs and alterations.....	21,198	118,986	55,017	51,928	27,557	34,977	88,356	35,222	23,710	40,312	30,921	76,384	614,988
Currency shipments to and from member and non-member banks and between the Federal Reserve Bank and its branch or branches.....	288	30,678	7,492	7,371	8,831	2,584	48,575	4,762	2,467	6,343	8,769	38,686	168,837
Currency shipments to and from Federal Reserve Bank and its branch or branches.....	45,126	16,066	34,936	26,144	11,380	19,746	41,281	12,636	4,632	12,335	12,456	15,354	276,672
Currency shipments (other than Federal Reserve Bank and its branch or branches) to and from Washington or a subtreasury.....	20,217	67,019	15,991	19,995	10,616	9,431	24,559	13,403	6,981	14,082	8,104	12,576	222,754
All other.....	23,594	80,382	17,887	18,124	9,215	20,355	67,772	15,865	15,464	21,996	43,431	20,994	265,709
Total expenses of operation.....	\$683,899	\$2,859,110	\$791,375	\$787,294	\$489,153	\$505,946	\$1,555,859	\$583,718	\$334,701	\$610,394	\$612,888	\$872,196	\$10,714,924

CURRENT EXPENSES—(Continued)

	Boston.	New York.	Philadelphia.	Cleveland.	Richmond.	Atlanta.	Chicago.	St. Louis.	Minneapolis.	Kansas City.	Dallas.	San Francisco.	Total.
Federal Reserve currency (original cost, including shipping charges).....	\$130,110	\$187,672	\$110,632	\$129,354	\$53,971	\$68,440	\$193,474	\$95,015	\$16,026	\$34,919	\$27,393	\$115,104	\$1,182,710
Miscellaneous charges account Federal Reserve currency.....	14,122	17,841	8,378	6,216	7,312	8,184	10,282	15,622	1,622	3,278	2,278	20,523	102,728
Taxes on Federal Reserve bank note circulation.....	42,000	95,394	49,690	98,407	20,491	26,654	74,989	24,400	14,437	41,734	30,628	29,453	518,734
Furniture and equipment.....	9,784	89,686	40,167	51,623	38,311	24,219	173,821	62,203	20,505	49,872	33,449	86,652	680,281
Bank premises.....	9,113	.....	90	.....	.....	.....	31,717	.....	.....	.....	.....	.....	40,920
Total current expenses.....	\$889,018	\$3,249,712	\$1,000,832	\$1,071,594	\$609,638	\$639,443	\$2,040,213	\$780,899	\$387,292	\$770,187	\$707,334	\$1,103,535	\$13,240,297
Current net earnings.....													
Ratio of current net earnings to average paid-in capital, per cent.....	\$4,589,888	\$24,067,066	\$4,935,223	\$5,337,995	\$2,619,880	\$2,705,230	\$11,011,716	\$2,504,859	\$1,866,880	\$2,657,079	\$1,471,115	\$4,731,044	\$68,538,065
Credits to profit and loss on account of—	127.0	203.6	121.8	109.1	113.6	151.5	173.7	121.4	118.0	128.1	83.5	156.8	151.2
Amounts previously deducted from current net earnings on account of—													
Income tax, January-June, 1920.....	\$18,696	\$168,682	\$41,828	\$46,555	\$25,521	\$20,392	\$66,784	\$19,519	\$16,607	.....	\$16,167	\$23,296	\$493,927
All other, net.....	15,586	346	104	28,365	\$181	\$885	\$1,093	.....	\$16,607	.....	\$13,989	\$13,989	\$105,205
Net credits to profit and loss.....	\$54,252	\$169,028	\$41,932	\$74,920	\$25,350	\$19,317	\$65,671	\$19,519	\$16,607	\$482	\$117,793	\$19,437	\$388,722
Net amount available for dividends, surplus, etc.....	\$4,654,120	\$24,256,094	\$4,977,255	\$5,432,915	\$2,655,230	\$2,724,547	\$11,077,387	\$2,524,378	\$1,883,487	\$2,657,561	\$1,583,322	\$4,750,451	\$68,926,777
Dividends paid.....	\$218,423	\$713,738	\$244,410	\$296,248	\$138,672	\$107,725	\$387,404	\$124,542	\$85,441	\$125,089	\$106,285	\$181,981	\$2,734,958
Carried to profit and loss.....	\$443,570	\$2,354,236	489,691	513,667	249,656	261,822	1,062,488	239,364	178,805	253,247	124,704	445,458	4,602,738
Carried to surplus.....	\$3,962,127	\$16,225,692	4,283,754	4,625,000	2,266,902	2,355,000	9,625,485	2,159,562	1,609,241	2,279,225	1,122,333	4,123,042	44,625,663
Reserved for franchise tax.....	.....	14,962,518	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,962,518

*Net debits. †Includes \$1,662,592 carried to "super-surplus" account.

private individual. The Government has no right to pile up vast profits out of banking operations while throttling the industries of the country by drastic deflation, and while denouncing profiteers in general business, and in banking, go on a profiteering scheme which puts to shame everything else known in the financial world.

In the light of these earnings, it is not surprising that an effort is being made to create a smoke screen by denouncing the rates of New York bankers, but it is impossible to hide the fact that a banking system created to help the public was never intended by Congress to become a mighty machine for dominating financial interests and piling up vast profits.

FIGHTING THE SOUTH AS ALWAYS.

In discussing the negro as a worker in Northern factories the New York Evening Post, true to its old-time hatred of the South, unchanged in heart by its change of ownership, as bitter, relentless and unfair as ever, said:

"Miserable wages, schools that are a denial of education, other restrictions, still persist in parts of the South. Now that the Northern employer is finding the negro capable, our recent immigrants from the South are likely to remain with us, and even to be followed by others. This gives enlightened leaders of white opinion in the South a fresh argument with which to fight for 'life, liberty and the pursuit of happiness' for their colored neighbors."

If the Post knows anything about the South, it knows that what it calls "miserable wages" of negroes is today an absolutely false charge, and it also knows that the low wages which so long prevailed in the South, and the lack of adequate educational facilities for whites and negroes, was due to the relentless grasp upon the economic life of the South by the cotton mill interests and the financial forces allied with them of Europe and of New England, who by the most tremendous and villainous efforts held the price of cotton down to starvation wages for the grower.

These cotton buyers and their banking connections robbed the negroes and the whites out of billions of dollars which they had justly earned. The cotton bears, respectable in financial and social circles, have been more guilty than the old and despised slave traders whose very business made them an outcast from all decent men, and they were so regarded even by the men who bought their cargoes of human beings.

The South paid low wages because the North and Europe forced its cotton down to starvation wages basis, and the guilt rests upon them rather than upon the South.

It would be criminal on the part of the MANUFACTURERS RECORD if it did not ceaselessly pillory, before all honest men, the bear gamblers in cotton mill offices and elsewhere, who have exerted their utmost powers to hold the South in poverty and illiteracy.

It is a great pity that when T. S. Lamont of J. P. Morgan & Co. bought the Evening Post he did not inject into its editorial management a change of heart as regards the South.

The Post announces that it will support Cox for the Presidency. That is a distinct loss to Cox, for the Evening Post's advocacy of him ought to cost him many votes among all true Americans.

OUR GOVERNMENT'S OPPORTUNITY IN MEXICO.

NO one knows what our "Open Diplomacy" Department in Washington is doing to settle affairs with Mexico. The spirit of the men in charge of the Government south of the Rio Grande has shown itself liberal enough to awaken belief that tactful representatives of this country, conversant with the Mexican people and with our peculiar disagreements with some of their late dictators, could arrive at a working agreement that would put an end to the so-called Mexican problem. The French Government has just formulated and openly announced the conditions on which that republic will recognize Mexico. They are sharp terms, such as one would expect from a business-like nation: indemnities for Frenchmen killed during the revolutions, reimbursement for damages sustained by her nationals, restitution of cash reserves taken from French banks in Mexico, and resumption of interest payments on the Mexican national debt to France. Somewhat similar proposals were made by Senator Fall's committee, but as that committee did not represent the idealistic theories of the Administration, we are not advised that such a governmental policy will be adopted. It affords President Wilson a singularly brilliant opportunity to cast partisanship aside and strike out boldly for the protection of American rights abroad. He could win instant applause by such a constructive course, and thereby recover much of his damaged prestige as a statesman.

A dark shadow hangs over our Department of State while William O. Jenkins is permitted still to flounder through the toils of legal persecution, without support from his Government, from which he held a commission as consular agent. It appears that he was even divested of his official standing, setting Carranza free to deal with him unrestrained by fear of diplomatic rupture. How can we expect Mexico to treat us with dignity when we so openly demonstrate that we have no officially represented national dignity?

Until an official understanding is reached between this country and the Mexican Government the regeneration of Mexico will be held back, and the benefits of free commercial development between the two nations cannot accrue. If we do not soon come to an adjustment of these difficulties we may find a foreign loan arranged by some other power under conditions that will take from us the advantage that the unfolding of her resources should give us because of our special interest arising from geographical nearness.

General Alvarado, Mexican Secretary of Finance, is now in New York trying to float a loan of about \$400,000,000. It is logical that we should loan money to Mexico, but it is clearly impossible to do it in default of a settlement of the diplomatic questions now pending. The two problems, diplomatic and financial, are complementary, and their solution could and should be advanced simultaneously and with mutual understandings between official and unofficial negotiators. The Government cannot detach itself from these matters of business; in attempting to do so it detaches itself from the one strong tie that determines amity and concord between nations. The unwillingness of our Government to regard its solemn obligation toward "American dollars in Mexico" was at the bottom of all the complicated and harrassing details that have made us despised by the Mexicans and by so many other peoples throughout the world.

We repeat that President Wilson now has a signal opportunity to make good at last in his dealings with Mexico, and to win commendation from all Americans, regardless of party. There are minor revolutionary troubles still going on, but as compared with the political conflagrations that

always surrounded Carranza these are mere bonfires. Even Esteban Cantu, the dictator of Lower California, has been persuaded, rudely it is true, but without serious conflict, to resign his authority. Pancho Villa, recognizing that the men in power afforded hope of real reform, has voluntarily retired to private life, under terms that give him distinction and cement his good-will to the existing regime. The chief sources of political disturbance have been dried up, and the way is clear for constructive, practical statesmanship. We cannot ask Mexico to provide it all; a large part, the most potent for future peace and progress, must come from Washington.

SOME POLITICAL STRAWS.

THE Baltimore News recently took a straw vote, and, referring to the work of the reporter, said:

"He made a sincere effort to be fair. Except in a few instances he purposely avoided the 'well-known Democrat' and the 'prominent Republican.' His aim was to find out what the intelligent, everyday man—the doctor, lawyer and merchant; the 'butcher, baker and candlestick maker'—thought about Cox, Harding, the League of Nations, the treaty, prohibition and the other candidates and issues before the people this year. How well he succeeded in his task the reader may judge from the following:

"The table appended shows approximately how the men interviewed say they will vote:

Number interviewed.....	246
Will vote for Harding.....	113
Will vote for Cox.....	100
Undecided.....	29
Noncommittal.....	1
Will not vote at all.....	2
Will vote Socialist ticket.....	1
Democrats or Wilson men who will vote for Harding.....	31
Republicans who will vote for Cox.....	2

"Several interesting points will strike the careful reader of the interviews. One of these is the large number of affiliated Democrats and independents who voted for Mr. Wilson who say they will vote for Harding this year. Some of them give as the reason for their change opposition to the League of Nations; others that a 'change of administration' is needed. Only two Republicans were found who said they would vote for Cox."

A brief statement of the views of the 246 men interviewed was given by the News, and one interesting feature to which, however, the News made no reference was the number who gave as their reason for voting for Cox is that he is "wet." Not a single man reported that he would vote for Harding for any such reason, but of the 100 who reported that they would vote for Cox nearly one-tenth based their vote on the ground that Cox is a "wet" candidate. It is impossible to get away from that rather striking fact. The statements made to the News by the "wet" men were as follows:

JOSEPH CRISMORE, carpenter, Independent, 1027 Lamont avenue—"I didn't vote in 1916, but will vote for Cox. I would vote for anybody just so he is wet."

JOSEPH SLECHTA, fireman, Independent, 926 North Chapel street—"Voted for Wilson and my sentiments this year are wet, and therefore I will vote for Cox."

JOSEPH RYBAK, shipworker, 1067 North Chapel street, Democrat—"I voted for Wilson and will vote for anyone who is wet—Cox, for instance."

GROVER BAFFORD, wagon driver, Democrat, 2107 East Eager street—"Voted for Wilson, and will vote for Cox because he's wet."

EDWARD BAFFORD, assistant to Grover Bafford on wagon, Democrat, 1800 East Eager street—"Voted for Wilson; same as my brother, Me for Cox, a wet man."

HENRY BERNHARD, drug clerk, Independent, Milton and Fairmount avenues—"I voted for Wilson and will vote for Cox because he's the man for the people at this time. He's wet."

JAMES KERR, news agent, Democrat, 130 South Carey street—"I didn't vote in 1916, but will vote for Cox, because I think he is 'wet.' Prohibition relieved me of a paying position and I want to do something against it."

GEORGE P. BURKHARDT, saloon-keeper, Democrat, 906 North Gay street—"Last time I voted for Wilson. This time it will be for Cox. He seems to be the 'wetter' of the two candidates."

LOUIS J. BELZNER, clerk, Democrat, 1901 East 28th street—"Wilson was my man in 1916 and Cox this year. I believe Cox favors light beer and wines and, anyway, he's a Democrat."

Was It Necessary to Go Back to the Law of the Jungle in Transportation?

THE most elucidating exposition of the transportation crisis—in its broad aspects—yet brought to our attention is that given by Commissioner Aitchison before the Calder Senate Committee on Reconstruction at a recent hearing in New York.

Senator Kenyon had been bringing out the point that priorities reduce the carrying power of the railroads and had asked if priorities did not work an injustice to shippers. Mr. Aitchison admitted that they worked a hardship, but rather evaded the question of injustice. He said: "I think that in a case of this sort we have got in a sense to get back to the jungle and look at necessity and common good as the extreme law."

That is exactly the course that the MANUFACTURERS RECORD has been saying right along was followed. The fact was plan to all who did not wilfully blind their eyes to it. It was quite useless to attempt to justify, under any code of law, the stringent orders which began to flow from the Commission after it had assumed control of the railroads. The object of the seizure of control was to put the roads in a position where they could ignore the rights of shippers, avoid their customary legal obligations and solve their problems by the employment of what was, and is, the equivalent of martial law in transportation.

Confusion of the truth does not mean that the motives of the gentlemen responsible for the course adopted are in any way to be questioned. The American people rather like executives who cut Gordian knots. They have cried for big men in high places, and big men are men who do things. But both the civil and the common law for centuries have cherished the principle that in the employment of conservatory writs, in making operative any harsh and unusual procedure, the most extraordinary care should be taken in the ascertainment of the alleged emergency.

That the Interstate Commerce Commission and the railroads did not ascertain their facts with sufficient care before resorting to the law of the jungle is amply established by the amendatory orders which followed the issuance of the initial priorities. Evidence of haste, of failure to assess accurately the devastating effect certain priorities would have on, say, the steel and iron industry have been forthcoming.

More than that, it is commonly accepted now as proved that New England in particular and the Northwest to a lesser degree brought about their own coal shortages by declining to buy coal when it was available. Mr. Aitchison, for instance, gave it as his judgment that "one very contributing cause (of the trouble) was the fact that the interests at the head of the Lakes did not enter into binding contracts for the coal early enough."

Testimony, according to Mr. Aitchison, showed that as late as July 9, or thereabouts, "the railroads which derive their coal from the head of the Lakes had not entered into any binding orders for coal." Also, Mr. Willard has testified that the coal exigency could have been anticipated and could have been avoided by earlier action on the part of the railroads in inducing the movement of coal to New England and the Northwest earlier in the season. If it be said that the causes could not alter the fact, the answer is that power and injustice walk hand in hand when innocent industries are compelled to face bankruptcy as a result of the improvidence of interests with which they have no concern.

The law of the jungle has been a ruthless disregard of the rights of great industries, representing investments of millions, whose transportation facilities have been taken from them in the most cavalier fashion.

Mr. Aitchison testified that he can find the word "speculation" nowhere in the Transportation Act; that the act does

not authorize a differentiation between essentials and non-essentials, and that discrimination is prohibited. But when asked if priorities themselves were not necessarily discriminatory, he seemed to be inclined not to go into that too deeply. He gave the impression that the Commission was opposed to priorities, because they were discriminatory, but had to use them under the law of the jungle. But they were not priorities of movement, he pointed out, but priorities in the assignment of cars.

"It does not seem to me that Congress attempted to make us the commercial dictator of the policy of the United States Government. If we can forbid the manufacture of automobiles because we consider them to be non-essential, there is little that we can't do," says Mr. Aitchison, which is a view with which we are in entire accord. But we wonder if that commercial dictatorship has not already been established when the automobile industry is, in fact, deprived of a free flow of raw materials, or when other industries are deprived almost entirely of transportation service.

We declared recently that control of the business of the United States had already passed into the hands of Government boards. We pointed out that the Federal Reserve Board held credit in the hollow of its hand and that transportation was no longer a right, but a privilege, as the Interstate Commerce Commission decided. If one Government board controls the credit which a manufacturer must have, and another Government board controls the means by which he ships, the manufacturer, it is plain enough, holds his solvency at the pleasure of the Government. He is not even theoretically free.

We were somewhat criticised for declaring that the powers of the Interstate Commerce Commission were such that it could virtually override the foreign policies of the Government, even repudiating obligations made by the Department of State and the President. Yet we find Commissioner Aitchison, although objecting to such a use of power, virtually admitting its existence. He had been arguing that to put an embargo on coal exports because exports were enhancing domestic prices would set a precedent under which it would be quite right to prevent exports of wheat, etc., in order to control prices. Professor Johnson then pertinently asked: "You can in effect, however, determine what uses shall be made of coal equipment, can you not, and thus really accomplish the prohibition of the export of coal?"

Mr. Aitchison replied: "Why, I suppose we could. To do so would be an assumption of power to deal with a question of international policy by an administrative agency which nowhere in the law is charged with that duty, and to do it would be counter to the express declaration of the departments of the Government which are concerned with these foreign questions as to whether it is desirable."

The power itself is not denied, but the wisdom of employing it is questioned. Moreover, it is well known that envoys from the Department of State repeatedly appealed to the Interstate Commerce Commission not to prohibit exports of coal. The Department of State knew that in a province where its powers were supposed to be supreme it was in practice subject to the decisions of another Government department, and had that other department been under the control of men differently inclined, not even the President himself, under the law, could have prevented the issuing of orders that would have amounted to a repudiation of the Government's commitments abroad.

Indeed, it was brought out by Mr. Aitchison that the Commission could even override Congress: "One other thing with respect to this embargo feature. The Commission might well

be reluctant to enter upon a matter of as grave a policy as this when Congress itself has had the proposal made to it to embargo these exports of coal and had taken no action." Senator Kenyon jumped to the conclusion that the witness felt the Commission was without power to lay an embargo, whereas the testimony showed that the Commission was "reluctant" to do so; did not think it necessary and declined to encroach on the functions of other departments. But the power of embargo, through domestic transportation orders, is there, and few who have studied the Transportation Act doubt it.

It has been maintained that paragraph 2, section 19, of the Shipping Act, which provides that no rules affecting shipping in the foreign trade shall be effective until approved by the Shipping Board or the President, is a retardant to embargoes by the Interstate Commerce Commission. But the point is not clear, and in practice would probably be of little influence. Indeed, the Chairman of the Shipping Board has within the week been protesting that charges for bunker coal were outrageous, and it is well known that the effect of Service Order No. 6 was to cause a drop of several dollars a ton in charter rates the Shipping Board was able to get for its coal ships. It is not recorded, so far as we know, that Service Order No. 6 was sent to the Shipping Board for its formal approval.

We have great sympathy for the Interstate Commerce Commissioners, who have worked diligently all summer and have been faced with problems of the gravest moment. They are entitled to applause for their modifications of rulings and their virtual admission of initial errors. They give the impression of being men sincerely devoted to the idea of doing the best that can be done to restore normality in transportation. But we cannot follow them or Commissioner Atchison in his view that resort to the law of the jungle was justifiable. There is in that attitude the shadow of future lawlessness, an augury of dictatorial acts yet to come in other departments of the Government, with this as the precedent. The Government itself cannot endure if discrimination is practiced. There were other solutions of the difficulty. The easiest way was sought, primarily by the railroads themselves, and they may thank their lucky stars if they do not have to pay for it over and over again.

There is no question in our mind that a revision of the Transportation Act must be brought about at the earliest possible moment. The Commission must be deprived of its unlimited authorities. There must be from it some tribunal of appeal, if only the President. It must have taken from it the right to issue rules and regulations which could have the effect of repudiating national commitments. It must be deprived of its power to declare on its own initiative a major emergency to exist. No instrument of Government, except the President himself, should be authorized to declare suspension of the laws in order to permit discrimination. None but the President can declare general martial law and none but the President, or Congress, should be authorized to declare the equivalent of martial law in transportation.

When the nation was threatened with the entire suspension of coal mining, the President did not think that the emergency was such as to justify the abrogation of the ordinary legal processes by declaring martial law, nor did anyone seriously ask that he do so. But, although it is acknowledged that there is no shortage of coal, the Interstate Commerce Commission, in a far lesser emergency, did declare a form of martial law. The right ever to do so again must be taken from it. If it is not feasible to rest the right to declare an emergency in the hands of the President, there should at least be provision for representation of the shippers and other interests in the consideration of an alleged emergency. As it is, certain industries are virtually having their property confiscated without due process of law. In any case, certainly, the declaration of an emergency should not be legal until ap-

proved by the President. The country has to make the fight now in favor of the principle that there shall be no commodity caste in transportation.

In connection with the failure of the representatives of foreign countries, who asked and obtained the right to buy coal in America, to agree among themselves not to bid against each other, it is interesting to note that a statement was made to the effect that it would have saved the American people millions of dollars if they had given away all the coal exported. The Government was right in permitting necessitous foreign nations to buy coal here, but it erred grievously in not having had some understanding as to the method of purchase.

THE PILLAGE OF THE FARMER.

NOT a farm that was worked in New Jersey or Delaware that has not exceeded its record in production for acreage planted this year. Commission merchants on Dock street say that while the great crop is a blessing to the consumer, it is about to prove a misfortune for the farmer, for the produce is now selling in many instances for less than the baskets and crates it is packed in can be bought.—Philadelphia North American.

The North American also reported that cantaloupes were quoted per crate of 45 to one dollar.

Eggs, at certain periods, would also be a drug on the market if there were not facilities for distributing the sales over the entire year. When the bounty of nature is a calamity to the farmer there is something wrong. And when the market cheats a farmer out of the reward of his labor, not paying him back even the cost of packing, there is a condition existing that spells ruin to the agricultural industry.

The politicians like to promise low prices, but in spite of the politicians there must be perfected some arrangement whereby the farmer can be reasonably assured of an honest market for his goods. If that means storing for gradual distribution, even though the demagogues call it hoarding and manipulation, nevertheless there will be storing, or there will be no agriculture. The laborer is worthy of his hire, and a civilization which does not see that he gets it is a house builded on the sand.

COTTON GROWERS DEMAND A PROTECTIVE TARIFF.

An attorney of Texas, writing to this paper, says:

"At Sioux Falls, S. D., yesterday young Mr. Roosevelt said: 'Tariff was taken out of politics back in 1913, and bringing it before the people now appeals to my sense of humor, and is enough to make a person laugh.'

"At Dallas, Tex., on the 12th the Farmers' League, composed wholly of old-fashioned Democratic farmers, adopted a resolution saying that the price of cottonseed had been driven down below the cost of production because of the importation of cheap Oriental oils, and requesting the Representatives of Texas in Congress to work for the imposition of a duty on the foreign product in order to protect the cotton industry.

"Mr. Roosevelt is a very comical young man. Like Victor Hugo's 'Man Who Laughs,' he laughs without any provocation."

With Texas cotton growers demanding a protective tariff, with the tobacco and the peanut growers leading in the same work, added to the long fight of Louisiana sugar growers for protection, the old free-trade theories to which the politicians thought the South was forever chained will be receiving a lively jolt. These politicians have so long preached free trade that they are now between the devil and the deep blue sea—the devil being their own widely proclaimed uneconomic theories and the deep blue sea being the rising tide of tariff sentiment which threatens to drown them beyond the hope of resuscitation.

Pity the poor free-trade politician who as yet does not know just how to jump, but let us rejoice that the South, so long injured and hamstrung by its free-trade policies, is at last, by the inexorable logic of threatened destruction of its agriculture, coming to see the truth.

The League War

WE venture to predict that the long series of wars that are being waged to rectify the errors of omission and the sins of commission in the Pact of Versailles will be known collectively in history as the Wars of the League.

It is quite impossible, as any tyro in architecture should know, to begin a cathedral by constructing first the clerestory. The normal and safe way is to lay first the immovable foundation, on which to erect the walls and supporting columns. To be sure the clerestory might conceivably be erected on false-works and the fundamental structure ultimately brought up to sustain it. The League of Nations, as the calamities in Europe now demonstrate with the definiteness of a theorem in Euclid, was constructed on political false-works, utterly without relation to any foundation that human society can stand on.

When all is said and done, it is "Our Daily Bread" that we seek and must have. It is this "daily bread," this assured provision of the necessities of life, that constitutes the reason for all the complicated machinery of government. This is such an elementary point in civics that it would seem absurd to restate it had it not been so completely disregarded by President Wilson when he assumed the role of grand prophet to the children of Europe.

Time and space are insufficient in a weekly journal to detail the fragments into which that part of the treaty referring to Germany was kicked by the unappreciative Germans. Since the punishment proposed was so insignificant compared with the crime, it was natural that they should seek to evade it altogether. As there were no foundations in international economics underlying the fanciful structure of this Versailles creation, it was not even to the interest of all parties among the Allies to co-operate in demanding that Germany fulfill her engagements. Hence we soon heard of mysterious midnight meetings between German officials and the representatives of other powers, followed by such concessions to Germany as made the members of our American legion gasp. What had been the use of the bitter sacrifices on the battlefield if Germany were still to be coddled as though she were merely a child that had committed some trifling indiscretion?

There are disagreements over Mesopotamia, disputes over Syria and Armenia, an impossible tangle over the lesser Slavic peoples, with Italy on both sides of the case at once, according as her interests are affected in the direction of Russia or in that of Dalmatia. Finally we have France and England failing to harmonize in the Polish imbroglio, reaching a point where a British official at Dantzig refuses to allow French ships to unload war supplies for the Poles. The excuse, to be sure, was that the pro-Russian sympathy among the German inhabitants of that port would provoke a riot if these goods were delivered on shore, which gives cause to wonder where were the British warships that could have commanded respect for the efforts of her Allies to sustain the new Poland, recreated, rebaptized and guaranteed peace by the marvelous Pact of Versailles!

Just because of petty politics no support was granted the Poles at the beginning when the massing of troops by that Russian destroyer of civilization, so adequately characterized in the note of August 10 by our State Department, menaced the security of Poland. She was told to sit supinely and await attack, in defiance of fundamental military principles which none knew better than the very Powers that gave such suicidal counsel; but there were special interests to be served! Once again the innate weakness of the League was shown. No association of nations can possibly endure that does not make it more advantageous for each to work in harmony with the rest than to seek the individual preferment of some of them.

The latest device to check Poland in making her frontiers

safe is the order that is said to have been issued that she must not follow the defeated Soviets beyond her own borders, which again is contrary to the principles of warfare. Since her protection depends upon war, then her peace, to be made effective, must depend upon a strategically out-manoeuvred enemy. It is by no means certain that the forces of Lenin and Trotsky will recognize their defeat and give proper guarantees if the Poles are restrained from subduing them by a menace of serious punishment.

Our State Department is said to be playing diplomatic chess in this Polish affair. It is a dangerous game for hands as inexpert as those at Washington. This Government is without authority to meddle in the matter except to administer the laws that regulate commerce with Poland. Mr. Wilson should realize that the representatives of the American people have not sanctioned the protocols he drew in Paris. It often happens that the protocols to a treaty are not accepted. Many a treaty has thus met shipwreck. We were not bound by the pretensions of our negotiators at Paris, and no one in Europe was under any misapprehension on that point. We cannot afford to inject ourselves into the disputes of Europe, which all the world realizes are being raised in simple selfish interest without regard to the pledges of co-operation in the Treaty of Versailles. Even England has threatened, within the week just past, to withdraw from Continental politics as far as possible and attend to her home affairs. Using the Treaty as a basis for negotiations, and hampered by a disloyal labor party in her own country, she has only aggravated the League War by her European activities during the last few months. Until she can clearly ascertain what policy her own people will endorse, she is in no position to say what England wants, even though she did sign and ratify the Treaty of Versailles. How much less can President Wilson afford to meddle in affairs of the League that we have not ratified, and manifestly never will! By not ratifying it we have kept ourselves at peace long enough to see the infinite weaknesses in that hastily considered alliance of the nations that means endless war.

THE AMAZING EFFORT OF LEAGUE ADVOCATES TO WIN FAVOR BY DECLARING THAT THE COVENANT DOES NOT DO WHAT THE PRESIDENT HAS DECLARED IT DOES DO.

WHAT is our Russian policy? No man knew until Mr. Colby explained it to the Italians.

What is our Japanese policy? No man knows because the Department of State has not seen fit to take the nation into its confidence.

Secret diplomacy is in the innermost fastnesses of its temples, and in matters that affect directly their most sacred rights the people are dedicated and rededicated without their knowledge or consent. As well try to extract blood from stone as to draw from the Government a hint of its intents in foreign affairs. It does not offer a program to Congress before embarking on it. It does not seek the temper of the public on matters of great import. Decisions are reached in secret places, and it was not more difficult during the war to discover the purposes and intent of the Hun commanders than it is now to find out in advance of commitment the program of the United States Government. Open diplomacy, if there ever was any, has been abandoned. There is none to nourish, but there are many to weep for it.

Our representative in the Supreme Council of the League of Nations, if the covenant were accepted without reservations, would be a man for whose appointment not even the

approval of the Senate would be necessary. At least the point is in doubt. But whether confirmed or unconfirmed by the Senate, the Congress could not instruct him. It cannot now instruct an ambassador. He would be the mouthpiece, and the mouthpiece only, of the President.

The Administration would have liked, in the recent emergency, to have given specific aid to Poland. Secretary Colby, in the political address he made to a visiting Polish delegation, intimated that failure to ratify the League had deprived the Government of the authority to extend the aid it wished. If America had been a member of the League, the President could, without asking the views of the American people, have instructed his representative in the League council to have voted in favor of extending military aid in Poland. We believe he would have sent those instructions. But the point is that it would have been within his power to do so.

Once the Supreme Council had decided on military aid, this Government would have been so notified. The President would then have notified Congress that the League had called on the United States for military aid, and he would have accompanied this by a statement that the Congress was morally bound to act accordingly. The President himself has stated that the moral obligation in such circumstances would be more compelling than a legal obligation. Congress would go through the form of declaring war, but its decision would have been made aforetime by contract.

This is a plain statement of the procedure. We doubt if any will question its accuracy. And yet some correspondents write in to say that the League could not have ordered us to send men and money to Poland, first because a unanimous vote of the Council would be required, and, secondly, because Congress alone can declare war. We wrote not of what the Council might do, but of what it could do. And where is there anyone to deny its power in the premises? We wrote not of the technical ability of Congress to refuse to declare war in circumstances where the nation had pledged that war would be declared. We thought of Congress as an honorable body, which, when called on, would do what the President and friends of the League admit it would be dedicated to do under the most complete moral and, we believe, legal obligation.

It is peculiar that men who talk much now about the inability of the League and its lack of power to make Article X operative are opposed to the Lodge reservation. It is harmless if the League Council is so impotent as the proponents of that point of view maintain. It would merely give definite form to a condition which these advocates say already exists.

But Mr. Wilson, who is under no misapprehension as to what the covenant means, does not go along with his followers. He does not claim that the Council would have been impotent to protect the territorial integrity of Poland, or that a call from it on the United States to send troops would have been in vain. He opposes the Lodge reservation because it would have left with Congress complete freedom of action when, such a call did come from the League. For Congress to retain that freedom of action would cut the heart out of the League, in the view of the President. He said that to make the League operative each nation must surrender a part of its sovereignty. One part of its sovereignty that the United States would surrender would be freedom of action by Congress.

Those who say that Congress would not have to declare war if called on by the Supreme Council to do so, admit that they would not tolerate ratification of the covenant were the contrary the case. Can they, in any conceivable circumstances, get the President to say that he interprets the covenant that way? In defending the League on that ground they build up a wall of reasons favorable to the Lodge reservations.

MORE THAN A POLITICAL BUGABOO.

The Nyal Drug Store.

Marked Tree, Ark., August 17.

Editor Manufacturers Record:

I am a reader of the *MANUFACTURERS RECORD*, and I regard it as the soundest exponent of American ideals published in this country today, and on almost all political and economic questions its editorials are my Bible. However, I find the editor is not inerrant, and sometimes shoots wide of the mark. In his editorial of August 5 on "Woman Suffrage and the South" I find the negro political bugaboo has even frightened him, and I must admit that I sat aghast for some time when I read this editorial from Richard H. Edmonds.

No sane man in the South today fears negro domination. The negro has already, as you are aware, been practically eliminated from politics in the South.

Why now at the supreme moment should the women of America be deprived of an inalienable right by trotting out this old political negro bugaboo?

It may be shouted from the housetops all over the land, but the halo of the crowning glory of woman suffrage may be seen over some of the Legislatures now in session. Two great questions I have stood for and fought for (and often single-handed) practically all my life, and these are woman suffrage and prohibition, and while I have passed my threescore, if the Lord will spare me only a short time more I shall see them both consummated.

The greatest menace between the negro and the white people of the South was the open saloon; it created and brought about more trouble than everything else combined; and now, with a strict enforcement of the prohibition laws, nine-tenths of the troubles will have passed away. No one need to have any fear whatever of the "negro question." However, it will continue to be used as a dernier resort in any campaign in the South where there is danger of a Republican defeating a Democrat, and this always works when everything else has failed.

I trust the editor of the *MANUFACTURERS RECORD* may live for many years to come, and continue his good work all along the line, though he miss the mark occasionally. No man is always right.

Trusting that woman suffrage may have been ratified by the thirty-sixth State ere you receive this letter, I am, etc.

J. R. BLACK.

Dr. Black seems not to note that while the negro vote has been largely eliminated in the South by the action of individual States, the negro vote, male and female, will no longer be eliminated in Presidential elections in the South, and under this bill we may count that the negro population in the South will henceforth be voted just as freely as it is in the debatable border States of Ohio, Indiana and Illinois. We fully realize that to some extent the negro vote has been used as a bugaboo, but we would ask Dr. Black what would happen in Arkansas and Mississippi and some other States if all negroes, male and female, voted freely? To what extent would race antagonism be aroused once more, and with an awakened race bitterness what would be the result?

Statements are being widely circulated in Southern papers that the Ku Klux Klan is being revived. If true, it presages an unfortunate situation, for while after 1865 the Ku Klux Klan helped to save the South to Anglo-Saxon civilization, similar methods now would never for one moment be tolerated by this country.

We are not surprised that the Republicans who do not understand the race issue in the South have favored woman suffrage, but we cannot possibly understand how Southern men, who are face to face with a vital reality, have deliberately shut their eyes to the danger or, as in many cases, have sold their own convictions at the demand of Democrats who do not live by the side of a real menace.

The *MANUFACTURERS RECORD* has a full appreciation of all the good qualities in the negro race. It would like to see some sensible qualification which would permit the better element to vote. It believes in doing everything possible to develop and advance that race, but it knows that everything which tends to create hostility between whites and blacks widens the breach and endangers the welfare of both. And this we believe will be the result in the South of woman suffrage.

Shipping Board Will Not Sell Ships Now Allocated to Operating Southern Lines

ANNOUNCEMENT of the sales policy of the Shipping Board reveals it an extremely liberal program, and, withal, fitting snugly into conditions. If it be said that it is a nursing program, the board may well plead guilty to the indictment, for there is the negligence of at least one generation to overcome, and the successful wooing of Neptune is not to be accomplished in haste. We face on the waters a supreme trade battle, with virtually all factors except our resources arrayed against us, wherefore it is important that the employment of those resources should be comprehensive. Moreover, the sale of property involving billions is in itself an undertaking of the first magnitude, and a penny-wise policy might easily lead to enormous mass losses. In addition, the object is not merely the sale of the ships, but the sale of them under conditions which will assure the use of the vessels under the American flag, on routes advantageous to American trade, under competent direction and on a business basis.

We do not want the fleets, under private ownership, to begin their ventures under impossible terms. We have learned from the tragedy of transportation on land that wisdom counsels liberal treatment; that the cheapness of service is an extreme extravagance if it results finally in the bankrupting of the carriers and their inability to meet the requirements of trade.

There were alarming rumors about last week to the effect that under the announced sales policy the Shipping Board would call on the new lines in the South, now operating Shipping Board vessels, promptly to purchase the ships they are using, failing in which they would be sold to outside parties. The facts are quite the contrary. The sales policy, of course, is not a Shipping Board policy at all. It is a national policy, decided on by Congress. The Shipping Board's function is merely to determine the method of sale, to carry the mandate of Congress into effect.

When the Shipping Bill was under consideration, Southern lines, developing new routes, were apprehensive lest their ships be taken from them in the manner described above. They were heartily in favor of a sales policy, but they wanted time in which to reach a position where they could buy. Senator Jones, in charge of the bill, because he favored the development of new lines, took the matter up with Admiral Benson, who gave assurances in writing that in making the sales policy operative the board would protect the Southern status.

We are permitted to state that his attitude has not in any way changed. The Shipping Board, Admiral Benson tells us, is absolutely dedicated to the principle of encouraging the established Southern lines which are now engaged in operating Shipping Board vessels. It will not offer for sale any of the ships now engaged on such routes, but will continue the status quo, giving the new lines every possible encouragement and helping them along until such time as they are able to finance the purchase of the vessels they use. That, Admiral Benson believes, is the mandate of the Shipping Act in fact and in spirit, and to it the board is dedicated by written and verbal assurances, as well as by conviction.

True, a new board is about to be appointed, but in this case the good faith of the Government has been definitely pledged, by legislators and by executives, and the program decided on is an established one, not subject to variation according to the whims of a new board, but definite and fixed.

But there are conditions, very properly. The board does not intend to continue the use of its ships on routes that are unprofitable and where it has been demonstrated surely that the losses will continue. Nor does it intend to continue indefinitely postponement of purchase. It is offering terms extremely liberal, and it feels that new operating companies should be able within a few years to establish their soundness to the

satisfaction of investors and thus be able to secure the funds necessary for acquisition of the vessels. The Government cannot be expected to keep up lines indefinitely if the people in the localities benefited are not sufficiently interested to invest their own capital in the enterprises.

One of the most important undertakings in the South is that of the South Atlantic Maritime Corporation and its associates. It represents a co-operative movement on the part of the South Atlantic ports. Its organization marked the termination, it was hoped, of certain local jealousies which did no good to any city, but were detrimental to the interests of all. There are some evidences of a revival of that spirit, although it is probable that the gentlemen directly concerned in making the enterprise successful would deny this. But it is a fact, nevertheless, and it is a tendency which should be brought to an end before it gets a fair beginning. It is a hard enough fight for all the South Atlantic ports combined to win through, and it is impossible if there is lack of the fullest co-operation. Indeed, we have been somewhat alarmed by private information which has reached us indicating that wedges were being driven between the cities, or between the cities and their back countries. The South Atlantic ports and the South Atlantic States must stand together. If they have any fighting to do among themselves, let them do it in their council chambers, but they must present a united front to the world. Moreover, each of the ports should be exercising every opportunity to bring into closer contact their own hinterlands. The tendency of the "up-State" and the "coast" in the several States to weary themselves in throwing brickbats instead of building together is a form of small-mindedness wholly out of keeping with the great results to be obtained.

There is no investing public now for marine shares. The people of the country have not been educated to subscribe to maritime ventures. They fear they may be throwing their money into the sea instead of lending it to the rich gods of commerce, whose largess has emblazoned the shores of history with the embellishments of wealth. There is in view, we understand, a comprehensive program of education which will undertake to teach the whole American people the opportunity there is in the marine for money-making, as well as the necessity of investing in the marine, whether it is profitable or not. Every firm that buys or sells abroad ought to own part of a ship, if we may put it that crudely. The manufacturer needs it as much as he needs a truck or a wagon. The marine as a whole is merely a larger vehicle of commerce, so large that it must be provided for by mass support.

England for years has not relied so much on the direct profit from her ships as on the profit from the things the ships carried. Efficient transportation is part of the manufacturing machinery. Your article is not manufactured, so far as Hongkong is concerned, until it is in Hongkong. Your cotton is not "made and marketed" until it gets to its destination.

It has been half a century in time—ten centuries in suffering—since the South could compete in rates and otherwise with Northern ports. Equal opportunity has come out of the womb of war. It flaunts itself before the South at a time when the South at last has "extra money." There is cash available to take advantage of the chance, and yet there has been an almost appalling hesitancy on the part of some Southern communities and capitalists to put their wealth into the new trade chances or to show that initiative which is the forerunner of prosperity.

We doubt seriously if any of the new lines from Southern ports are going to be able in three or four years to build up surpluses out of profits that will enable them to purchase ships. The most they can do is to demonstrate that they have a busi-

ness proposition to make. They are going to need the support, support in dollars, of the communities they serve. They will have to begin, and do it promptly, a campaign of education of their own. They have got to build up an army of investors in marine stocks, a clientele of far-visioned men who can see in the years ahead the dollars grow where pennies are now current.

The Southern mills, we are advised, are showing a tendency to view with favor investments in shipping from nearby ports. Improbable as it may seem, subscriptions from interior towns have in many cases been larger in the aggregate than from the ports through which the shipments would go. The faith that moves mountains has its eyes on the sea. But the mills, it stands to reason, are going to expect, as they ought to expect, "their" ports to meet them at least halfway.

There is a new era dawning for the shipping of the South. Her starved ports have tasted food and have begun to get the rich red blood of commerce. Competitive rates are opening to them not only their immediate hinterland, but also the vast stretches of the interior. They are bidding for trade more than a thousand miles into the continent. They are offering facilities that count. The manacles have been torn from them, and they are free. The tribute that flowed for fifty years to other ports they can now command for themselves. The sea that was divorced from them has become their bride again. Vast is their opportunity and generous the terms the Government permits for taking advantage of it. The rest is up to the South. She, like the railroads, is on trial. The temper of her business men is being tried, their spirit, their faith, their ability. No section can be great unless there are great men in it. The South has such men, and they are on the march.

"IN TOUCH WITH EVERYTHING."

WRITING to the MANUFACTURERS RECORD, Mr. J. M. Fox, Sr., a blacksmith of Memphis, Tenn., in stating how much he appreciated reading the paper, says: "I even enjoy the ads.; they put a man in touch with everything."

In this statement Mr. Fox shows that he is a man of discernment and fully knows the value of the advertising pages of such a publication as the MANUFACTURERS RECORD. These advertisements do indeed put a man in touch with everything. They represent the best thought of more than a thousand of the foremost business houses of America. The editorial pages of this paper represent the views of its editors, but the advertising pages represent the best that is in more than a thousand men, each one trying to present the claims of his business or his industry in the most forceful way possible.

Moreover, there is an infinite variety in these advertisements. A man might study them for many days and still find much to learn as he turned from page to page and noted the thought that must have been put into the preparation of practically every advertisement there. These advertisements cover a wide range of human affairs. They touch on almost every line of activity, from the mining of the ore to the final finished product in which the steel is sold; from the mining of the rock for the making of cement to its final use in house and road building and in the construction of bridges.

Banking interests, agricultural interests, the opportunities of a territory along a number of leading railroads, farms for sale, men wanting jobs and jobs wanting men are but a few of the many things which enter into the make-up of our advertising pages.

We wish it were possible to induce every man who reads the MANUFACTURERS RECORD to have that appreciation voiced by Mr. Fox of the pleasure gained in reading the advertising pages, because they put every man who studies them "in touch with everything."

A CLEAR-CUT STATEMENT FOR THE OPEN SHOP.

THE W. K. Henderson Iron Works & Supply Co. of Shreveport, one of the leading iron works and supply houses in the South, recently carried big display advertisements in all the daily papers of that city worded as follows:

"To the Whole World:

It has come to our notice that a rumor is being circulated that we have signed up with the Union.

Such a statement is
a Falsehood.

We have not signed up with Any Union and Shall Never sign up with a Union.

Our plant is being operated strictly as an Open Shop, and will always be operated as an Open Shop.

It matters not to us what workmen
belong to, so long as they have a 10-
hour day to sell for 10-hours' pay.

We are located in Shreveport, La., in the United States of America—a Free Country.

Our shop will be operated at night as well as by day."

Union labor by its unwarranted and unpardonable attacks upon the open shop and upon the rights of the individual laborers of the country has forced men of independence everywhere to stand out for the open shop without the domination of radical labor union men.

Under labor union rule there could be not possible independence for employers and employees. The labor union, as it is now controlled, is contrary to the spirit of American liberty.

Men have a perfect right to join a union; but other men have an equal right to stay out of unions.

Employers have a perfect right to employ union men, and they have exactly the same right to run an open-shop plant and employ non-union men.

No man has a right to say that men who do not belong to a union shall have no right to work.

If union labor could get deep down into its soul the fact that its success must depend upon maintaining the highest class of membership, so that an employer would know that every union labor man was a faithful, efficient worker, then the union labor organizations could be made of tremendous value to themselves and to employers. But when labor unions undertake by force and by riots and murder to say that other men shall not work, or that factories employing non-union men shall be boycotted and picketed, and at times destroyed by dynamite, as has been done, then union labor to that extent is viciously criminal, and is no better than any other murderer.

The man who waylays his victim in the dark alley and murders him in order to rob him of his money or his watch is in no way a greater criminal than the labor union men who club or stone a non-union labor man merely because the latter refuses to join the union and is determined to maintain his independence and his right to work.

Until the law punishes criminal labor union men with the same force that it punishes the individual murderer, and until labor union officials and members regard with the same horror any crime committed by a labor union as they would a crime committed by a professional criminal, there can be no safety in this country, except through the development of the open shop.

Labor unions have invited the contest that is now on, and the advertisement which we have quoted is only typical of the spirit which is abroad throughout this land, where employers are determined to have the right to run their own shops and employ union or non-union labor according to their own desires, and where non-union men hold as a sacred right the privilege of working where they please without the domination of labor unions.

The Dye Industry Essential to Our Safety

THE American Economist, which has contributed very materially at times to the education of the American people along economic lines, is very much provoked because the MANUFACTURERS RECORD took it to task for reprinting from some New England paper an obviously slanderous attack on the South in connection with the coal situation. Our contemporary says in defense of itself:

"The truth of the matter is that the MANUFACTURERS RECORD is peeved at the American Economist, and takes advantage of a very small matter to find fault and to accuse it of unfriendliness to the South. The trouble is that the American Economist opposed the 'Dye Grab Bill,' a measure which the MANUFACTURERS RECORD favored. It is unthinkable that the course of the MANUFACTURERS RECORD was in any way influenced by extensive advertising of great corporations which were vitally interested in the 'Dye Grab Bill.'"

The record in Washington seemed to indicate very clearly that there were more great corporations opposed to the patriotic dye bill than were in favor of it. The MANUFACTURERS RECORD does not find it necessary to toady to any of them, which may explain why it vigorously supported the bill at all times, while the American Economist apparently satisfied the interests on which it is dependent by malevolently describing the measure as a "Dye Grab Bill."

The bill was passed by a Republican House, with Mr. Longworth its chief supporter, and it would have passed the Senate had a filibuster not prevented. We suggest, therefore, to our contemporary, which is ardently supporting Republican principles, that it may be doing considerable harm to its party by declaring that the gentlemen entrusted by their party with the conduct of legislation interested themselves in a "grab" bill. It is a charge more serious than any which political opponents have made. The truth is, of course, that the dye bill was not in any sense a "grab" measure, but the support given it reflected great credit on the gentlemen whose visions were broad enough to see in it a great patriotic movement, entitled to the support of all good citizens, and particularly of the textile interests.

At the time the bill was killed by a filibuster and through the intense hostility of Senator Moses, we declared that its defeat would be a national disaster, and we presented unanswerable arguments in support of that position. We were right then and we are right now when we say that the bill must be passed at the next session of Congress in essentially the form presented.

"Ex-Attache," who writes with intimate knowledge on most European questions, had this to say in a string of papers August 10:

"Since the possibilities of another world war are looming on the horizon, in which the powers of the Entente may once more find themselves arrayed against Germany, but with a Germany working hand in hand openly instead of secretly, as heretofore, with the Bolsheviks of Russia, it is well that it should be widely known that ever since the signing of the armistice at Compiegne on November 11, 1918, German scientists have been busily engaged in inventing and developing new explosives and, above all, new poisonous gases regardless of expense, the funds being furnished by great German business magnates of the domineering, brutal type of Hugo Stinnes, who represented the German coal interests at the recent congress at Spa, where he exasperated all the Entente statesmen and delegates by his almost intolerable insolence.

"That he should have been permitted to attend the meeting was in itself inconceivable, since he was admittedly the author and promoter of the systematic destruction of the coal mines and various industrial establishments both in France and in Belgium during the latter part of the German occupation.

"It is boasted by such men as the Prussian general and military writer, Von Bernhardt, that our next war with Germany is not far distant, and that it will be largely a chemical war—a war in which Germany will make use of explosive bombs of unprecedented force and of bombs filled with poison gases of such an appalling character that they will kill well-nigh instantly all within the reach of their fumes. These bombs will be dropped by aircraft.

A few tons of mustard gas would have stopped absolutely the Hun advance in March, 1918. A few tons of some other kind of gas may cause this country later to pay in thousands of lives and billions of treasure if Senator Moses and his friends are able to force the admission of German dyes into America, driving the American chemical industry on the rocks and providing the Hun with such paraphernalia of destruction that his triumph in the new war he plans would be swift and certain.

It is significant also that our London dispatches quote Mr. Vernon Clay, chairman of the Reconstruction Committee, as saying that "the Government intends to bring in a licensing and prohibition bill" because protection of the dye industry would be impossible by means of tariffs. In fact, Mr. Clay states that all alternative methods of fostering the industry were considered and shown to be of trivial value.

Such textile interests as have been so short-sighted as to protest against the Senate dye bill in order to get temporarily their dyes at a possible lower price will do well to reconsider their position and come out flat-footedly in behalf of this thoroughly patriotic measure of national preparedness. We cannot afford to be less provident in chemical preparedness than England intends to be, and it is not surprising that the nation should question the patriotism of interests which busy themselves in killing legislation the failure of which is certain to strengthen Germany and to paralyze the most important arm of the national defense.

IMPORTANT, BUT NOT TRUE.

WE do not think that Mr. Roosevelt, the Democratic candidate for Vice-President, will repeat in another address the following statement:

"The Republicans are playing a shell game on the American people, because they are still busy circulating the story that England has six votes to America's one. It is just the other way. As a matter of fact, the United States has about 12 votes in the Assembly. Until last week I had two of them myself, and now Secretary Daniels has them. You know I have had something to do with the running of a couple of little republics. Facts are that I wrote Haiti's Constitution myself, and if I do say it, I think it a pretty good constitution."

Omitting reference to the impropriety of the remarks and the woeful disregard they show for the rights of small nations, it may be stated that high officials of the Department of State were not only amazed at the statement made, but also question its accuracy. It is true, they believe, that the tendency of smaller American nations would be to vote with the United States, but there are innumerable questions where the mere spirit of perversity would cause them to be antagonistic. As to the United States having actual control of the votes of these small nations in the League assembly, there is only one answer and that is a complete one. The control does not exist.

ONE FOOT IN THE TRAP.

IT is being boisterously claimed by Governor Cox and others that Congress would not have to authorize the sending of troops abroad even if the Supreme Council of the League of Nations did decide on a co-operative military movement for the protection of the territory of a member of the League.

The covenant provides that a member may withdraw from the League, on two years' notice, provided it has fulfilled all its obligations under the covenant. If Congress failed to carry out the League's instruction, how, we wonder, could the United States ever get out of the League?

Disobedience would make it a perpetual member.

For National Good Will

United States Senate,

WASHINGTON, D. C.

Marion, Ohio
August 16, 1920

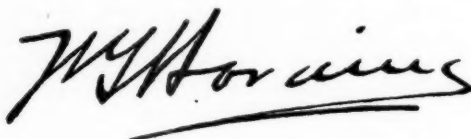
Mr. Richard H. Edmonds,
Manufacturers Record,
Baltimore, Md.

My dear Mr. Edmonds:

I beg to make a belated acknowledgment of your courteous letter of August 10th enclosing proof sheet of the interview carried in the current Record. I shall be highly gratified if the interview accomplishes the lofty purpose which you had in mind in publishing it. No one believes more cordially than I do in unity of spirit and oneness of purpose and utter mutuality of interest throughout the republic.

Very sincerely yours,

WGH-L



COTTON FARMERS NOW IN TOILS OF DEFLATION MOVE.

THANKS to the dogged determination of the Federal Reserve Board that the business of the country shall be "deflated," the calling of loans and the withholding of credits by members being the highly efficient agencies employed to force buoyancy out of business, the bear speculators are having a harvest in cotton, and the price has now been hammered down to a figure which is in many cases below the cost of production.

Just what may or can be done to meet the emergency is a matter receiving the earnest consideration of the South, individually and through organizations. The American Cotton Association proposes to guard against future crises of this nature by urging drastic reduction in cotton acreage for next year, with a maximum planting of food and feed crops.

Senator B. B. Comer of Alabama, before leaving for a sixty days' trip to Alaska, announced at Birmingham that the Avondale Mills, of which he is the head, would co-operate in a movement to raise a fund to finance cotton holders of the South. Denouncing the activities of the bears as a determined effort to depress the price of cotton, with the result that the farmers of the South will lose a great deal of money

unless they are assisted in holding their crop to frustrate the bear raid, Senator Comer said:

"I believe so strongly in the injustice of this that I want to announce that the Avondale Mills Company will place \$200,000 at 6 per cent for twelve months to assist the Southern farmers in holding their cotton. Something must be done to save the Southern cotton farmer from incurring tremendous losses. These losses are sure to come unless he is aided in holding his cotton."

While palliative measures may be necessary at this time to meet an emergency, the only real remedy, the sure cure for a very menacing disaster, is to let the banking credit of the nation properly function as it was doing before the Federal Reserve Board felt called on to put the brakes on business.

Philip Armour used to say: "When I want groceries, I go to a grocer, whose business it is to sell groceries. When I want money, I go to a banker, whose business it is to sell money, or credits, the same thing. I don't dislike bankers as a class; in fact, I think a banker is as good as anybody else so long as he behaves himself."

There never has been a time in the history of this or any other country when the people could afford to put their banking capital or credits into the hands of a few individuals exercising autocratic control. The disadvantages of such a situation are everywhere apparent today, at a time when universal, all-pervading prosperity should abound throughout the land.

A Fair Statement of the Rights of Labor by Senator Harding

DURING all the campaign of the last few years against high wages, the MANUFACTURERS RECORD has unceasingly insisted that except in unusual cases, mainly in Government work, laboring men had never until of recent years had a fair show in wages. Against the effort of the Federal Reserve Board and all others who have sought to deflate, or as the saying is, "liquidate" labor, we have earnestly protested. High wages are a blessing; low-priced labor is the costliest labor. We rejoice in the higher wages paid to the farm hand, to the day laborer and to the mechanic, even though it may take a long time to readjust everything to the new basis. If the bankers and business men had spent half as much time and energy in enlisting labor to produce more efficiently, as they have spent in denouncing labor for inefficiency and extravagance, the whole situation would long ago have been righted. President Harrison uttered a great truth when he said, "A cheap coat makes a cheap man." Let America pay wages high enough to permit wage-earners to live in comfort, to educate their children, to lay aside something for old age, and by larger earnings be stimulated to greater achievements; let farmers make larger profits than ever known until the last year or two that they may be able to secure the blessings of larger comforts and more opportunities for the women and children, and we shall then have laid a safe foundation on which to build for permanency.

These have been among the things for which we have long contended, and we rejoice that Senator Harding holds views so in harmony that we might almost feel that he had been a close student of the doctrines constantly proclaimed by the MANUFACTURERS RECORD. In a recent interview on these subjects, published in the Outlook, Senator Harding is quoted as follows:

"I have faith in men; I believe that the average man is square; I believe in labor's fairness when treated squarely and given an opportunity to become familiar with facts pertaining to its vocation. If employers would be more frank with their employes they would soon find a different feeling existing in industry. Workingmen should be made thoroughly familiar with conditions, so that when an ultra-radical comes along, grossly misrepresenting conditions, the workingman can intelligently refute his statements. Not being familiar with the facts in the case, thousands of honest, well-meaning men become imbued with the idea that they are being viciously oppressed; misunderstandings result, causing trouble that could be avoided by a simple exposition of the truth. The doctrines of extreme radicalism are founded on gross misrepresentations, and surely the best way to meet misstatements is to contrast them with the truth. Foreign-born workmen have been held up to public censure when the public itself in a great many cases is to blame for not having extended the helping hand of friendship to the men we had invited to come to our shores. I firmly believe that if our Government and those interested in our Government had taken as much pains to familiarize the incoming foreigner with American ideals and the liberties that the Constitution bestows as the radicals have taken to misrepresent and misinterpret our Constitution there would be far less trouble in this country today. Quite true, the foreigner coming here with the intention of stirring up violent opposition to our form of government should be severely dealt with; but I am convinced that a vast majority of immigrants come here with the intention of becoming industrious and patriotic American citizens. The loyal support given by the sons of foreign-born in the recent war should be sufficient evidence to convince the most skeptical that this conclusion is true."

Mr. Harding manifested deep concern over the railway and coal situation, and spoke at length on the present critical condition of our great distributive system, pointedly remarking: "The present chaotic state of railway transportation should convince the most radical labor leader that returns to railway management should be so gauged that necessary capital may be enlisted for purposes of adequate reconstruction and the paying of wage increases. It also should prove to the most narrow-minded industrial captain that labor must receive an adequate wage to function properly and guarantee continuity of service. A breakdown of the transportation system plays just as much havoc with capital and management as it does with labor and the public. Yet the public are the

ones that feel its effect most, and labor is the chief sufferer in the long run. Surely the events of the last few months have conclusively proved that the inability of management to secure sufficient capital to carry on its business to capacity leads to certain industrial paralysis that affects not only the railway system, but every industry and department of economic life in the entire country.

"Without adequate transportation, industry must necessarily contract to a point of stagnation; farmers would be unable properly to move their produce, and as a result widespread unemployment and ruin of the entire economic fabric of the country would be inevitable. The present crisis simply proves that autocratic injustice to capital and management is as detrimental to the wage-earner as autocratic injustice to labor is detrimental to capital and management.

"We have entered a new era in the relationship between management, the worker and the public. No longer can labor be considered a mere cog in the wheel; no longer can capital and management remain deaf to the necessities of the workingman. They must realize that the human element in industry comes first; they must realize that the aspirations and yearnings of millions of American wage-earners must be considered with sympathetic understanding, and differences worked out by applying the broadest principles of industrial justice."

The Senator is thoroughly convinced that aloofness of the employer which has manifested itself in many instances during the last few years must be eliminated if confidence between the employer and employe is to be restored. He emphatically believes in a closer understanding between office brain and workshop brawn.

"Proper relationship between labor, management and capital can be brought about only by all three elements coming to an understanding mutually arrived at through common agreement, all parties realizing that the destruction of one is the ruin of the others and the suspicion or rebellion of one unavoidably involves the others. There is not, and should not be, class distinction among the multifarious elements constituting American society. Each acts as a foundation for the other; each element in itself is absolutely dependent on all other elements, and all are necessary for the industrial, agricultural and financial welfare of the nation. In the past capital and management have not paid sufficient attention to fostering the good-will of the workers who are the foundation stones of successful industrial enterprise. Ignorance of problems confronting the employer naturally engenders suspicions and prejudices, leading to industrial strife that would be avoided if the workman was properly familiarized with the difficulties confronting his employer. Mutual understanding would beyond doubt dissipate a majority of the industrial troubles facing us today."

Practically the whole situation as to employers and employes, and as to all other relations in life, could be met by the one great command, "Do unto others as ye would that they should do unto you." In every human relation let men put themselves in the other man's place and then in all sincerity follow the Divine command, and in that rule we would find a solution of nearly all of our problems.

HARD TIMES BY EDICT TO BE OVERCOME FINALLY BY IRRESISTIBLE FORCES.

THE financial writers are becoming freer in their hints, apparently inspired, that within a couple of months "liquidation" will have been carried far enough to justify a softening of the "deflation" program of the Federal Reserve Board, and the word is being passed "by submarine" that good times are coming for those who have the courage to rush in now and buy stocks.

The Federal Reserve Board has made no decision to lower discount rates, and has not given the subject very serious consideration. The rumors are probably amazing to it. But there is substance back of them, just the same, for the preponderance of argument is passing to the side of those who protest against hard times by edict; and economic forces, though running slowly, are piling up a tide which is certain to catch up the Federal Reserve Board and sweep it along.

Meantime, the "strong hands" into which bankers, or some bankers, desired war bonds and other securities to be driven, have been making hay. They were not averse to taking advantage of the opportunity that was forced on them. Cor-

respondingly bitter have been the experiences of those not so strong, but probably just as honest, who made the grievous error of accepting in full faith the definite promises of their own Government.

Under what process of reasoning it is considered good policy to drive down arbitrarily the prices of the great commodities which we sell abroad and depress by billions the paper evidences of the nation's wealth we do not know. But the prices of stocks have been driven down and down, until the ratio of public debt to the estimated national wealth had been increased at least one-fourth. A debt that could have been paid with so many bales of cotton and so many bushels of wheat must now be paid with an additional number of bales of cotton and an additional number of bushels of wheat. What the Federal Reserve Board is applauding itself for is an arbitrary depression of the national assets, a policy, which if pursued by a private individual, would land him in the insane asylum.

Moreover, although there is no authority in law for the Federal Reserve Board to differentiate between essentials and non-essentials, and it insists that it does not do so, few journalists ever get a statement from the responsible officials that there is not in it some utterance such as "liquidation of non-essential credits is being brought about by a gradual process," etc. The people of the United States never put into the hands of a few men sitting in Washington the right to say that this legitimate business venture is essential and that business venture is not essential; this shall have credit and that shall not. It is a power so arbitrary that the Reserve Board declines to accept responsibility for it, but points with pride to the fact that its policy has had the effect designated.

Some of the news emanating from the Board is truly amazing. We read in one news story that "the program to liquidate non-essential credits, officials explained, has been to effect a normal and healthy liquidation without curtailing essential production;" but in the first part of the same article is this statement: "Officials announced that the financial gains which may accrue from the gradual liquidation of credits now in progress may be more than offset by the decline in the production of essentials in many lines. Shutting down of mills in the textile and other trades was considered a most disturbing factor in the general situation." When it is claimed in the same breath that essential production has not been curtailed, but that essential production has been curtailed, sensible men may well wonder if logic is not taking a holiday.

Comptroller of the Currency Williams also said that deflation had brought about increased production, but when we publicly called on him to produce the specific facts on which he based such an illogical conclusion he neglected to come forward with the proof. The reason, of course, was that he did not have it.

In the news story from which we have been quoting it was also stated that "shocks to industry have been carefully avoided in the operation of the policy outlined." That will be news to a number of industries which have been put out of business. If they have not been shocked, they must wonder what a real earthquake is like. Men who use the vocabulary in that way would doubtless have referred to the San Francisco cataclysm as "a minor and local disturbance."

What the Federal Reserve Board has been doing is to break down business initiative in the United States. Its theory was that the country was doing too much business. It became afraid of prosperity. Nor did it have even the excuse which the Interstate Commerce Commission had, because that body was able to base its business depressing attitude on the material ground that physical equipment to carry the nation's legitimate business was lacking. It did not object to the business, but seemed rather to lament inability to handle it. The Federal Reserve Board, on the contrary, was not with-

out facilities. It simply said that there was too much business and went ahead to curtail it.

We gave, as did a number of economists, ample warning of where the policy would lead. You cannot choke the reservoirs and keep up the water supply. You cannot dam the sources of credit and keep business healthy. There comes a time inevitably when the dams must be removed and a free flow restored. That time has almost come and the financial experts, whose business it is to sense the future, are well aware that it makes no difference whether the Reserve Board has decided to modify its program or not. They know that it must modify it, willy-nilly, and that is why the financial writers are hinting at the approaching change.

It will come soon enough to avoid a panic, but the country will long remember the dreary months of depression through which the Federal Reserve Board unnecessarily caused it to pass.

THE SOUTH FACES THE BATTLE OF THE YEARS IN COTTON PRICES THIS FALL.

A DIRECTOR of one of the large cotton mills of New England was talking recently to a Southern friend. "We are getting a little bit anxious," he said, "because it looks as if the South now had enough money to hold her cotton until we pay what it is worth."

The gentleman in question did not object to the fact. He himself felt that it would be a good thing for cotton to bring a fair price. He was speaking rather for men with whom he is associated.

The persistent effort of the Federal Reserve Board to drive down the price of all commodities, which means of all products of the farm, has been as successful as might have been anticipated. The pawnbrokers, who have had rather lean years, declare that business is picking up. Men engaged in legitimate production have been reporting that business is slacking down. The Department of Justice has been investigating the closing down of woolen mills in New England. It need not have wasted money sending its agents so far north. It had only to drop down to the Treasury to find out that "quit buying" was a slogan of an important other branch of the Government. The fight against the high cost of living becomes strenuous every year just as the crops are coming to market. The speculator is thus able to buy at a low price. By the time he gets through with the public thereafter it is another summer and time for another anti-high-price campaign. It must fill the hearts of certain officials in Washington with joy to see the cotton quotations and the wool quotations and realize that they have been able to force prices down below cost of production.

But the South has received at least some share of her earned profit on the last few cotton crops. Had she not been robbed for fifty years, she would long ago have had ample capital. Now she has some. She has enough, unless the Federal Reserve Board begins a direct attack on the commodity, to hold the present crop until the price is fair. The New England director has visualized the fact. There is enough money in the South to prevent the usual exploitation.

Not only that, but the American Cotton Association is fully conversant with the commodity situation, and in it the producers have a ready source of information to which they can turn for instruction. They need not sell for 30 cents or for any other number of cents unless the price represents cost of production with profit added.

It has been, the statistics seem to show, the most expensive cotton crop ever produced. Every factor of cost has been higher than before. Some may, under unusually favorable circumstances, have made big yields, and so have reduced their unit cost, but the average cost has certainly been far up. A low estimate would be 30 cents the pound. It would be a world disaster if cotton sold at near that figure. It would

mean that what labor there has been in the fields would be even further curtailed. It would mean the abandonment of additional acreage, not for one season, but forever. The British know this, and that is why they were advised last year to forsake the policy of driving down prices, to insist that prices be kept at attractive figures, if for no other than the selfish reason of increasing production. But such motives make no appeal to the speculators. They want to cash in quick, and all they care about is driving down prices until they have the actual cotton in their hands. Then they will be ready enough to bull the market.

If the American Cotton Association states what is a fair price for cotton, every farmer should hold until he gets that price. It is with him more than the money from one crop; it is his fight for independence; his battle for freedom. When he sells for less, he does not merely dispose of his cotton; he barter away, too, a part of his self-respect.

This is the critical year. As the New Englander said, the South now has enough money to compel decent treatment. The time has passed when distress cotton can be the barometer of prices.

WHAT ANSWER WILL YOU MAKE?

A LEADING deacon in a Baltimore church in discussing the Presidential candidates recently made the statement that if his party "nominated the Devil," he would vote for him.

The spirit which prompts a man to think this way—and there are many men who are doing it—is not a spirit of religion; it is a spirit of the Devil, guided and controlled by the Devil. The man who would prefer voting for an unscrupulous or immoral man as President of the United States merely because his party had nominated him, in preference to a reputable man nominated by another party, has no recognition whatever of his individual responsibility to God, or man, or to human liberty. Such a man has no right to expect honor and morality in his own children when he openly expresses his willingness to vote even for the Devil if nominated by his party, and he should, therefore, have no hope that his children will not have the seeds of immorality, dishonesty and irreligion implanted in their hearts.

It matters not whether the man who makes such a statement be a Democrat or a Republican, he is false to morality and to Christianity; false to his own children; false to the morality of the nation; for in such action he encourages to the utmost extent of his ability the rising generation to disregard honor and virtue and morality.

It is a lamentable fact that this spirit has often been voiced by many men whose partisanship is more intense than their honor, intelligence and religion. It is a spirit which endangers the moral forces of the nation, and a spirit which, if it generally existed, would sap the whole moral stamina of the American people, and rightly doom them to the condemnation of Almighty God and to the destruction of all American liberty.

Parties are not greater than honor. Their commands are not so binding as the teachings of Christianity. Their demands are not so supreme as the demands of morality. He who votes for Republican or Democrat without regard to the moral qualifications of the candidate, whether it be for a city office or for the Presidency of this republic, and who doing so adopts the idea that his party may nominate even the

Devil and still receive his vote, encourages his party to nominate men lacking honor and morality, and thus he is a co-worker with every influence for evil which the Devil in this way can bring to bear.

In the coming Presidential election every honest man has resting upon him a very grave responsibility; if he fails to meet it, he becomes a traitor to morality and to civilization. It matters not whether he be Republican or Democrat, it is his solemn duty to vote for the man who represents in his honest opinion the highest personal morality and who will be the least controlled by unholy influences.

The Republican who votes his ticket merely because his party says so is recreant to his responsibility if he believes that his party candidate is not, all things considered, the best man for the place.

The Democrat who votes at the behest of his party without regard to the character of the candidate or to the influences which may have controlled him or his nomination is equally as false to his country, and to civilization.

In times past many men have said they voted for one candidate and prayed for another, but the man whose moral backbone is so weak that, regardless of old-time affiliations, he is unwilling to stand out and vote as he prays and pray as he votes, is a coward. He, too, is unworthy to stand as a representative of morality and an upholder of liberty.

If we would burn into the minds and hearts of the young people of this day morality and honor, if we would uphold virtue, if we would make safe this country against the terrific sweep of what seems to be a breakdown of the moral forces of the world, then it behooves every man to vote in local and in national affairs for the man who in his honest opinion, after the most thorough investigation he can make, stands as the highest representative of honor and virtue. He who fails to do this should be forever ashamed to look his own children in the face, for he by his own act will be doing his utmost to lessen their regard for honor and morality.

Carlyle said: "Your actions speak so loud I cannot hear your words." It matters not what profession a man may make—whether he be a preacher of the Gospel, a teacher of the young, a business man, a farmer, a manufacturer or a laborer—who is unwilling in all honesty and sincerity to vote for the man who he believes to be the highest type in honor and morality of those who have been nominated in local and national affairs acts in behalf of immorality, it matters not how loudly he proclaims his morality.

He who is willing to vote one way while praying that the other side may win has not yet learned the first rudiments of the morality which must be driven home into the American people if this country is to be saved from the sweep of irreligion and immorality which is abroad throughout the world.

Against the Tide of Socialism and Bureaucracy.

W. L. MACGOWAN, Vice-President and Secretary-Treasurer, Floridin Company, Quincy, Fla.—We understand that your issue of June 24 contains a lucid and strong article entitled "Handing of National Transportation Facilities Over to One Industry." If you have excerpts or copies of this article, kindly mail one dozen copies to us with bill.

Permit us to commend your editor for the magnificent stand you have taken, and continued to take, for the interests of manufacturers. Your editorials are an inspiration, as well as a bulwark, against the oncoming tide of thoughtless and wicked usurpation of power by most peculiar officialdom.

GENERAL PERSHING ANSWERS THE ABSURD CONTENTION THAT THE ARMISTICE WAS A GODSEND TO THE ALLIES.

UNDER the caption "Old Stuff," the Asheville Citizen, which seems to be under the impression that the plea of the Germans for an armistice was a Godsend and saved the Allies from ruin, says:

"Editor Richard H. Edmonds, that veteran arm-chair strategist, whose absence from the allied war councils caused so many mistakes in military policy, has found an apt disciple. Taking up the stock war topic of the MANUFACTURERS RECORD, our afternoon contemporary says, quite tragically, 'When, in the fated days of November, 1918, the Germans held up their hands and cried "kamerad!" "kamerad!" there should have been neither parley, nor mercy, nor surcease of battle,' until the allied armies entered Berlin, Moscow and Constantinople.

"This is magnificent, but it isn't war, according to as widely recognized an authority as Major-Gen. Sir Frederick Maurice. General Maurice, discussing 'The Last Four Months,' says that in the weeks immediately before the armistice the allied transport system was not able to keep up with the victorious troops. Maurice says this first with regard to the British and then adds that the difficulties of the Americans were greater. And it is not hard even for a layman to understand why rations, heavy artillery and other supplies could not keep pace with the boys who were determined to do what these swivel-chair critics now lament they were not allowed to do. General Maurice says that 'a great and rapid advance,' such as might have brought about the complete destruction of the German armies and ended the war with a colossal Sedan, was out of the question."

While we have no doubt that General Maurice knew more about the difficulties in which the Americans found themselves than did the American generals, still, in spite of that, we have a very profound respect for the judgment of John J. Pershing, in direct command of the American forces. In his official report, page 52, first paragraph, copies of which can be procured from the Government Printing Office, General Pershing says:

"By the 7th (of November) the right of the Third Corps had exploited its river crossing to a distance of 10 kilometers east of the Meuse, completely ejecting the enemy from the wooded heights and driving him into the swampy plain of the Woevre; the Fifth and First Corps had reached the line of the Meuse River along their respective fronts, and the left of the latter corps held the heights dominating Sedan, the strategic goal of the Meuse-Argonne operation, 41 kilometers from our point of departure on November 1. **We had cut the enemy's main line of communications. Recognizing that nothing but a cessation of hostilities could save his armies from complete disaster, he appealed for an immediate armistice on November 6."**

General Pershing says that the armistice alone prevented the Germans from suffering a complete disaster. We trust that our contemporary is answered.

PRACTICAL MOVE TO IMMEDIATELY INCREASE TRANSPORTATION EFFICIENCY.

IT is announced that the advisory committee of the Association of Railway Executives definitely aims, with the co-operation of the public, to improve transportation so that there will be attained:

1. An average daily minimum movement of freight cars of not less than 30 miles per day.
2. An average loading of 30 tons per car.
3. Reduction of bad order cars to a maximum of 4 per cent of the total owned.
4. An early and substantial reduction in the number of locomotives now unfit for service.
5. More effective efforts to bring about the return of cars to the owner roads.

A bulletin issued from the headquarters of the association, 61 Broadway, New York, also says in effect that it is obviously impossible to immediately overcome deficiencies in railroad equipment, owing to the time required to build cars

and engines, and emergency action is therefore necessary looking to the most intense use of existing facilities. To increase the average daily movement of freight cars one mile would be, it is asserted, equivalent to enlarging the available supply of cars by 100,000. In May, 1917, under stress of war conditions, an average movement of 29 miles a day was attained, and there were two months when the movement was slightly more than 28 miles. Some railroads have recently made substantial improvement by intense efforts. It is believed that the war figures can be surpassed to meet the needs of peace.

Daniel Willard, chairman of the advisory committee, in presenting the transportation improvement program before the Interstate Commerce Commission recently, said:

"It is important, especially in times of car shortage, that the shippers should load cars as quickly as is economically possible and practicable after they are received. The shipper also should furnish prompt and definite billing instructions, and the instructions so furnished should take the car, if possible, to its ultimate destination. Much delay is caused by the practice of billing cars subject to order or reconsignment in transit, and numerous other devices that have come about from time to time. All arrangements of that kind serve to retard the movement of cars. All arrangements of this kind are in effect a special privilege aside from the service of transportation, and in times of car shortage such privileges are at the actual expense of those whose business is interfered with because of their inability to ship at all."

For each loading of a car a shipper has 48 hours free time and the consignee has 48 hours free time in which to unload it. Besides, if the car is loaded with coal for a port or with export freight, the time allowance is greater. Here is a great opportunity for saving time. Delays also occur to cars when they have to be transferred from one railroad to another.

Could there be accomplished a saving of say 10 per cent in these several instances the beneficial results to the railroad service in its entirety would be exceedingly great. Most Americans have yet to learn the primary lessons of economy: they have not been instructed along this line except in a very few instances. Co-operation, or in other words, team work, is all that is required to relieve the transportation situation tremendously and save thousands of dollars not only for the railroads, but for the shippers of commodities. Think for a moment of what a day means to farmers in the shipment of their products to market! It often means the difference between success and failure. Not only to agriculturists does time saving mean much; it is equally important to the manufacturers and the contractors of the country. Lack of raw materials may cause a factory shutdown, or lack of supplies may cause a cessation of work upon a contract, causing loss not only to the contractor thereon, but to workmen and others.

It should not be so hard, with earnest co-operation between the public and the railroads, to establish a 30 miles per day movement for all freight cars, but the public should realize their responsibility in the premises. The blame for delays cannot justly be wholly placed upon the railroads.

Where Would the Line Be Drawn Between Non-essentials and Necessities, and Who Would Draw It?

J. C. HILL, Secretary and Manager Hill Veneer Co., High Point, North Carolina.

For a long time I have been wondering what would be the economic effect on the country should the production of luxuries cease and people devote their energies to the production of necessities. I have not been able to arrive at a satisfactory conclusion in this matter, and would appreciate it if you would write an editorial or an article in the MANUFACTURERS RECORD dealing with this problem from an economic standpoint.

As luxuries or non-essentials, tobacco, chewing gum, jewelry, perfumery and laces are a few of the many examples.

Should the energies of the country be directed exclusively to the production of essential things, would there be work for all and would there be more money to devote to schools and good roads, etc.?

Some Opinions on Federal Reserve Policy of Deflating Business

"Will the Federal Reserve Board Define Unessentials and Luxuries?"

Under this caption the MANUFACTURERS RECORD prints as a frontispiece in its issue of August 5 an editorial in which the Federal Reserve Board is asked, in view of its present stringency, to define "unessentials and luxuries." It is pointed out that people find great difficulty in securing from banks or building associations money for constructing much-needed dwellings.

Of course, every one knows that the purpose of the Federal Reserve Board is to bring down the high cost of living, but many business men, among them some bankers, fear that they may carry the matter too far and impede legitimate business. It is reported that farmers will not be able to hold their cotton, even though the market may be going down with consistent regularity, because money will not be loaned on it. There is a great difference between speculation in cotton and the grower of the staple holding it until he can get a price in line with what it cost him to raise it. Certainly the Federal Reserve Board has no intention of forcing farmers to force their cotton on the market. As we heard one prominent Augusta banker express it, "why cross the street in a big shower of rain? wait until the shower is over!" Then why force cotton on the market as it is going down? It may go down for a time, but it is going up again, and the farmers of this section are entitled to a good price, they must have a good price and they will get a good price if they do not have to force their goods on the market.—Augusta Chronicle.

[Does not the Chronicle know that the definite plan of the Federal Reserve Board is to break down prices of all commodities, curtail business and deflate everything? Last winter we urged a member of the Federal Reserve Board to make a study of the actual cost of cotton growing and offered to have several experts who had given years of study to this question send him statements showing the actual cost of cotton production. In reply he wired that he did not care to get into any controversy on the cost of raising cotton. A well-known Southern orator once said "facts embarrass me." Perhaps facts in place of theories would embarrass the Federal Reserve Board. But it does not seem to be embarrassed by average earnings at the rate of 151 per cent a year for the twelve branches, however much the people are embarrassed by the high rates charged and the limitation of credit for legitimate business.—Editor MANUFACTURERS RECORD.]

A Comptroller of Deflation.

[Wall Street Journal]

With the Reserve Board "stimulating deflation" by raising rediscount rates at one end, is it a normal function of the Comptroller of the Currency to render abortive the consequences at the other? The Reserve Board says in effect: "We will make the new middleman's—the Reserve Bank's—rediscount rate so high in each district that it will prove a contagious discouragement to all non-essential commerce and to all essential commerce in excess of an essential volume."

Standing alone and apart, this would seem to be a large order, a thing to be characterized as a "stupendous banking undertaking," the reduction of the whole business of the country to a square with a single mind, that of the board. The country is not small. Its population is not sparse. Its growth is not at a standstill. Even the long-established chartered banks of "little Canada" have not dreamed of a single rule, all comprehensive, unified extermination of the "non-essential" or the "redundant."

That the results anticipated a year ago from automatically ascending premiums on money have not been realized, bespeaks much for the volume of necessary business and the sturdy resistance of much natural growth to under-nourishment is undeniable. In spite of the extra cost of money inseparable from a central system of rediscount, business has shown amazing resistance to all sleeping potions. The price for high money has been paid. Turnover has been maintained.

Business Halted by Politics When Business Activity Is Supremely Important to Nation's Welfare.

The J. Milton Hagy Waste Works,
Cotton and Wool Waste Manufacturers.

Philadelphia, Pa., August 17.

Editor Manufacturers Record:

We are enclosing you herewith check for \$6.50 covering our subscription to your MANUFACTURERS RECORD.

We are quite frank to state that we pay this more cheerfully than for any other trade paper; in fact, the writer looks forward to your MANUFACTURERS RECORD more so than any other reading matter which comes to his attention, either in business or home life.

We like your religion, politics, observation, fearlessness, and most of all, the uncanny accuracy of your diagnosis of present and future matters of which we all should know.

It is indeed gratifying to us, and it certainly must be more so to you, to see the trend of thought changing—rather we should say education—toward reservations in the League of Nations.

We often chuckle reading the attempts to criticize your stand on many issues with a maze of generalities, and then see your reply of incombustible facts.

We have felt for a long time that the leadership of this Administration has caused the present state of world's unsettled conditions. This is a broad statement, but can be easily substantiated. We trust that the incoming administration, whichever party it may be, and somehow we have a great deal of confidence and hope that it will be a Republican one, will be able to see the wisdom of encouraging business men, actually protecting public interests, silencing the labor agitator, who is the defamer of our soil, and who, though in the minority, intimidated all honest workmen. We are thankful that there are plenty of the latter, as it is from the honest workmen that big business and leaders in our national life have arisen.

We believe with you, although we both may be wrong, that the Federal Reserve strangulation is not in order. For one thing, they are apparently seeking to correct their error because gradually there seems to be an inclination to help any group, whether industrial or agricultural, which shows that it is at the point of bankruptcy.

We have today merely a business postponement, caused by artificial means, and if we could use the wonderful financial resources of this country, and sooner or later we shall come to this, we shall then see that this temporary stoppage is nothing but postponement.

We, as business people, are the losers because we are regulated by that unfair instrument, the income tax, which does not protect us against terrific losses of one year when we have a year of fair returns.

So it seems to legislate against legitimate business in order to catch the speculator and profiteer (the latter word we believe is somewhat overworked), does not look to be the proper course. For one thing, the speculator sooner or later hangs himself, and we believe he is very much in the minority. In other words, to our mind the Federal Reserve is operating the wrong way. In the first place, they cannot eliminate the fact that there is an actual shortage of most everything, and this will positively have to be caught up first. We again repeat, we are now in the midst of postponement.

Any lowering prices which seem to exist in a great many lines today are no doubt caused by a general panicky feeling. If every business house and individual were to buy and build actually what they need today we are quite sure this general shortage would be easily felt.

We place ourselves on record as saying that if the Government stops interfering, and it certainly must do so, we would soon be in the midst of a wonderful business period which should last for a long time.

We need to build homes, offices, factories, schools, churches, roads, keep labor regularly employed at good wages, scare off the labor disturber, and when production approaches the demand, then every business man can regulate his own affairs. When the time

approached when prices and values would be naturally entitled to go off, then he could anticipate this if he could see ahead, and if he could not he would suffer a loss, whereas, as we have it now, Government interference prevents the business man from practically conducting his own affairs.

If politics is the guiding hand of the Federal Reserve, in order to have the unsuspecting public to fly to that particular camp, forgetting that while some prices are lower, business is being ruined, apparently after election this will cease.

THE J. MILTON HAGY WASTE WORKS,
Soft Waste Department, W. G. Beck, Mgr.

The South Must Act to Save Itself in Cotton and Other Things.

Pineland and Egypt Farms.
Mayesville, S. C., August 16.

Editor Manufacturers Record:

The articles on pages 93 and 111 show conclusively that we have no friends in the Federal Reserve Board. Our only remedy is the organization at once of cotton-holding corporations, such as I outlined to you in a recent article which you have not published. I am writing Colonel Thompson today urging such a plan, and to the Columbia (S. C.) State to publish your and Colonel Thompson's articles and to urge the organization of holding corporations.

The South now can finance cotton if we go about it right. If we lose this opportunity our enemies will so despoil us that in a year or two we will practically cry forth "buy a bale," to our everlasting disgrace.

If Harding comes to Columbia on the 25th I will make things interesting for him and for the audience. E. W. DABBS.

Bank Discrimination Condemned in South.

In part, the editorial stated:

"Nothing could be more alien to the rightful purposes of the Federal Reserve Act or in sharper conflict with business wisdom and fair play than a singling out of the automotive industry for drastic restrictions of credit. For the sake of the principle involved, as well as the vast practical interests at stake, it is greatly to be hoped that the Federal Reserve Board will in no wise countenance, much less recommend, any policy to this effect. A rumor is abroad, however, that the regional banks have received suggestions, if not explicit instructions, to cut automobile credits to the bone and marrow, leaving the development, indeed, the very life of this great province of commerce and industry helplessly crippled. That responsible heads of the nation's financial affairs should take such a position is almost unthinkable; certainly it could find no support, but only condemnation, from the discerning rank and file."

Effect of Credit Curtailment and Deflation of Federal Reserve Board on Wages and Industry.

[From Financial Letter of August 20 of Hambleton & Co., Baltimore Bankers.]

Wage scales must come down if prices are to be reduced. There can be no blinking that fact. Those who point to the reductions which have been effected in clothing, leather and other lines because of the credit pressure overlook the salient fact that the "cuts" were dictated by necessity. These enforced reductions were for the purpose of obtaining cash and thus turning over the stocks in the hands of both manufacturers and middlemen. The result of this crusade and the slackening of the general demand in many lines is best reflected in the effect upon the woolen industry, where over 55 per cent of the employees have been temporarily thrown out of employment; in the shoe line by over 8 per cent, and in the motor manufacturing plants by over 34 per cent. The banks having been forced to curtail, and the need for money being urgent, the "slashing" process was inevitable; in its turn, it has markedly reflected upon the producing area.

As a matter of fact, the automobile business slackened overnight, and it is stated upon reliable authority that the largest manufacturer of the cheaper grade of cars, whose business practice heretofore was to require cash payments, is now taking 60-day acceptances in order that his production of some 4000 cars a day may not be reduced. In accessory and related lines the "pinch" also is beginning to be felt, and in many instances corpo-

rations face hardships because of unbalanced inventories and cancellation or reduction of orders.

In this view of the situation labor cannot continue to fight for the levels which prevailed during the war. The Reserve Board broke into the stability of war prices with a vengeance, and in many respects its untimely action has proven a boomerang to mill and other employees. That action having been taken, however, it is not now in order to quarrel with the consequences save in so far as they have produced a condition which, compared with high prices demanded by labor, is certain to provoke a most unhappy condition of affairs.

British Railway Fares Also Increased.

London, England, August 6—[Special.]—According to the American Chamber of Commerce in London, railway fares in Great Britain are to be increased by 1/4d. a mile as from August 6, and as a result unprecedented scenes have been witnessed in consequence of the rush of holiday makers to get away before the increase takes effect.

The working of the railways in Great Britain during the year has resulted in a deficit of over £54,000,000, but the railways in the United States have also been worked under Government management, and they showed a much larger deficit. In both cases increased wages to employees account for a large proportion of the deficit. The recent advance awarded by the National Railway Labor Board in the United States, amounted to £120,000,000, and in Great Britain the increase granted on July 1 will cost slightly over £4,500,000.

The rates for freight have not yet been fixed in Great Britain, but are expected to come in force by September.

Underground railways serving London are in a precarious position, one railway publicly announcing that, although during a period of six months over 73,000,000 passengers were carried, no dividend on stock was paid, while for the half-year ending June 30 the controlling company of the underground combine made a profit of £42 only, and none of the companies in the combine paid a dividend exceeding 2 per cent for the same period.

Competition of motor transport is being increasingly felt, both as regards goods and passengers. Many large firms are finding it cheaper and convenient as well as quicker to transport goods by motor, even over long distances, and railway companies are becoming apprehensive as to the growth of this competition.

Oil From Shales Soon to Be a Reality.

Dallas, Tex., August 20—[Special.]—Actual operation of retort plants for the treatment of oil shales of the Sacramento Mountains is soon to be a reality, according to E. W. Hartman, president of the United States Producers Refining Co. which has installed one of the largest plants of the kind in the country at Santa Maria, Cal. Mr. Hartman predicts that there are 25,000,000 barrels of oil in the known shale formations of these mountains which will average 40 to 75 gallons of oil to the ton. This can be produced, he says, at a cost of about 80 cents a barrel.

The United States Producers Refining Co., which has its general office at Dallas, constructed its California plant under direction of Dr. David T. Day of the United States Geological Survey, and it has operated so successfully that units increasing its capacity to 5000 barrels a day are being installed. C. W. McKinney, the company's chief geologist, and C. A. Greenwood, field superintendent, accompanied President Hartman recently on his explorations of the Sacramento Mountains.

Hartman believes that the by-products obtained from the shale will more than pay expenses of operating the plant. For instance, he estimates that each ton of shale will produce 9000 to 15,000 cubic feet of gas, which can be used for power purposes in the manufacture of gypsum products from the white sands and the extraction of aluminum from red clay found in the Tularosa basin. He estimates that this clay contains 25 pounds of aluminum to the ton.

This company's system is reputed to get as high as 80 gallons of oil to the ton, and to handle 15 tons of shale to a retort, whereas the system in Scotland, where this sort of oil extraction originated, is said to handle but one ton. Mr. Hartman says that steam shovels can be used in getting out the shale just as they are employed in securing ore from the Chino copper mine at Santa Rita, N. M. He says probably a dozen plants will be installed in the vicinity of Alamogordo.

A Minister's Reasons for Opposing the League of Nations

DECLARES THAT PATRIOTISM, REASON, HISTORY, EXPERIENCE, AND FINALLY THE BIBLE, ARE ALL AGAINST "THE MOST INIQUITOUS SCHEME EVER DEVISED," THE LEAGUE OF NATIONS AS PROPOSED.

By JOSEPH JUDSON TAYLOR, D.D., Leaksville, N. C.*

"I sincerely hope you may be successful with others in keeping us out of what I conceive to be the most iniquitous scheme ever devised, the League of Nations." So wrote Rev. Dr. Joseph Judson Taylor to the editor of the *Manufacturers Record* in recent private correspondence. We present herewith an elaboration of Dr. Taylor's reasons why America should not join the League of Nations as proposed. Dr. Taylor is a distinguished Baptist minister and publicist, a native of Virginia, educated at Southern Baptist colleges, and ordained a Baptist minister in 1876. He has had a long and notable career in the ministry, as an educator, and as a writer on religious topics. His present address is Leaksville, N. C.—Editor *Manufacturers Record*.]

This subject is an issue before the people at this time. There is no known reason why it should not be considered candidly, and as far as possible without partisan bias. The writer is a Democrat, reared and educated in old Virginia. He had 14 uncles in the Confederate service, and some of them never got back. He was in school, and was not registered for the Hancock and English campaign, but he voted for Cleveland in 1884 and in his subsequent races; also for Bryan, and for Parker, and for Wilson in succession. The league question, however, is larger than any party. It concerns the entire people. With the utmost respect for such as hold a different view, the writer is opposed to the league in toto, and he here offers some of the reasons for his opposition as they occur to him.

1. Patriotism is against the league. If some man of repute could get a hearing to plead for the abrogation of the Declaration of Independence in favor of the British crown, or for its subordination in any way to British authority over American activities, he could offer some considerations in favor of the scheme. He could plead the common ties that bind a daughter to her mother. So far as ruling influences are concerned, he could plead a common language, common traditions, common ideals in matters of justice and religion, and common hopes for the final freedom and happiness of all mankind. He could point to the peace and dignity of Canada, as she enjoys the freedom of local autonomy and yet has the sense of safety arising out of her connection with a vast empire on whose dominions the sun never sets. He could recount Britain's present rule over all the seas, and with some show of reason he could predict that with all the vast resources of North America joined with England's maritime power, Anglo-Saxon ideas could govern the world. After weighing all the advantages of such a scheme, would not every true American reject it with disdain? Would not the unfortunate proponent of such a plan be branded as a traitor, or else treated as a clown and laughed out of countenance?

There is no way to maintain independence and at the same time subordinate it. Such a proposal violates a fundamental law of logic. What then must be thought of the patriotism, or of the intellectual acumen, of men who seriously propose in any way to subordinate American independence to an agglomeration of foreign nations, different in race, in history, in language, in cultural advancement, in governmental ideals, in religious creeds and in everything that enters into national life? On so grave a question men ought to act intelligently, and not be guided by vapid sentiment or political prejudice. Others will follow their own judgment or their fancies, as the case may be. It is their right to choose their own way; but with the light before him, if need be, the writer will forsake the dearest friend he has on earth rather than betray the land of his birth by supporting a proposal that surrenders to the control of foreign nations any part of her blood-bought liberties.

2. Reason is against the league. If war is wrong, the wrong cannot be obliterated or allayed by contract. The principle underlying such a proposal is false. If a thousand merchants were to enter into a league not to cheat their customers, their action would be an open confession that they were a thousand thieves at heart. If a hundred lawyers were to league up in a covenant not to swindle their clients, the fact itself would be a proclamation

that they were shysters who could not be trusted to do right. If a company of matrons were to covenant together not to betray their husbands, their foolish conduct would be a scandal and would engender domestic doubts in each of their homes.

Right and wrong are not matters of contingency. At this point Mr. H. G. Wells lost his way and turned into a blind alley. His Mr. Britling had no fixed principles. He was an ardent pacifist—only when there was no occasion for being anything else. He was for peace conditionally, his convictions depending entirely on others. Was he for truth and soberness, honesty or any other virtue conditionally? His answer would be an indignant protest, and yet he sees no inconsistency in being against what he calls the wickedness of war only on condition that other people are. And such inconsistency underlies the entire structure of trying to achieve peace by contract.

The official draft of the proposed covenant undertakes "to achieve international peace and security by the acceptance of obligations not to resort to war," but the entire document, from preamble to signatures, offers no reason whatever for achieving peace and not resorting to war! It nowhere commends peace, neither does it condemn war. In fact, it is the product of victorious war lords, whose hands are red with blood. It utterly lacks the marks of sincerity on the part of those who have put it forth. Inadvertently or in a moment of reaction against camouflage and deception, President Wilson himself declared in his first public address after getting back from Versailles that it was a league for war. Why, then, shall anybody be deceived about the matter? The league rests on a false principle, and it secures its popularity chiefly as it is misunderstood. For no true American could possibly favor it if he understood that it binds him and his children unborn to share the age-long embroilments of foreign lands.

The same lack of fixed principle underlying the league is shown also in the conduct of some of its champions. Men who are today denouncing the wickedness of war only a few months ago were as earnestly proclaiming the righteousness of war, the war they wanted. Ministers who, like the writer, have never read a treatise on international law in their lives, have felt quite competent to lecture Senators on their duties concerning the so-called league for peace; and yet less than two years ago the same men were preaching war from their pulpits, and in some cases were promising the victims of war salvation from sin and rest in Heaven. In no case have they professed a change of view; they have simply swapped sides, as if they were more anxious to be popular than to be true guides for their people.

3. History is against the league, and the past gives it no support. Centuries before Jesus was born Corinth formed a League of Public Peace, and set Philip, and later Alexander, at its head. Soon the high contracting parties felt that their liberties were endangered, and they repudiated the league. They found it easier to get in than to get out. War ensued. Alexander won, and the effort to get out became a pretext for uncommon cruelties. Many of the conquered were brutally murdered, and the remnants were sold into slavery worse than death. If there was any sincerity in making the league, its proponents got only disappointment for their pains.

Rawlinson mentions a League of The Endless Peace negotiated between Rome and Persia. It cost more than five tons of gold. Peace by contract comes high. It seems that our famous covenant cost America alone some \$400 a word before it got home, to say

*Part of the material in this article is borrowed from the writer's new book entitled "The God of War," copyrighted and published by the Fleming H. Revell Co. It cannot be used without permission.

nothing of subsequent costs. The piper must be paid. And the boasted Endless Peace lasted just eight years. The hypocrites who enacted the sham knew that they were deceiving the people and getting their gold for naught.

If there is any sacred political covenant known on earth, surely it is our American Constitution. It was born out of the travail of great souls. It was christened in the blood of patriots. The majority of the States in the Union came under its sacred spell one by one, as children are born into the household. In the purity of youth every native-born citizen comes to its privileges with an oath on his lips, swearing by the God of his fathers to uphold the Constitution of his country and to support its flag. And yet a few decades ago noble men by the thousand felt that there were obligations higher than those expressed in any human covenant, which justified them in renouncing their oaths and repudiating their covenant and taking up arms.

The very covenant under consideration has been put to the test and found wanting. Whether freely or not, more than a score of nations have adopted the covenant; but the pathetic fact remains that they have failed "to achieve peace by accepting obligations not to resort to war," and are fighting like fury just as before.

In the face of these lessons from history, ancient and modern, local and foreign, it is passing strange that honest Americans can profess a reasonable hope that an alien covenant written by victorious war lords and urged upon enfeebled nations, different in race and religion and in all their schemes of life, can have any binding force. If by the spirit of party loyalty and the lure of beautiful fancies a majority of the American people could be induced to abandon the traditions of a glorious past and take up this league, why should they so use their power? Policies can be changed by majorities, but principles cannot. Why should voters despise the convictions of their fellow-citizens and force them to league up with Huns and Hottentots and what not for the partisan purpose of testing anew a scheme that all history has shown to be abortive and vain? Would it be kind? Would it be just? Would it not incite inevitable strife and discontent? Why make the experiment?

4. Experience is against the league. One of the fathers of American independence said his path was lighted only by the lamp of experience, and such light we have had. Impelled by a sense of duty and guided by our ablest men, we did our part in the recent turmoil abroad. This is no place to discuss the matter. Every man is entitled to his views. Whatever we got out of it, the question is whether we want it again. All parties agree that the league binds us to the same sort of thing, whenever the occasion shall arise. Do we wish to be bound?

It is said that a burned child dreads the fire. A child is able to learn by experience. Is the American voter less than a child in understanding? Does he want any more of what he has had in foreign embroilments? After all the centuries a horse still runs into a burning barn. The poor dumb beast learns nothing by experience. The average American voter is not as dull as a beast of the stall. He learns by experience, and his experience does not favor binding himself and his children to bear the brunt of foreign wars.

5. The Bible is against the league. Some partisan politicians and preachers with partisan bias have had a good deal to say about the Christianity of the league. Not one of them, whether politician or preacher, has quoted a single passage from the Bible or a single sentence from the league covenant in proof of what he has said. Not one; no, not one. Voters, had you thought of that? The reason is plain. There is no such passage in either document. The thing cannot be done.

The idea of a league to achieve peace is distinctly Godless in origin. In his day Immanuel Kant, born in 1724, was the leading agnostic in Germany. He advocated a league of nations to regulate international affairs. Jeremy Bentham urged the same thing in England. He proposed a congress of deputies chosen from the nations to adjust their differences, and prescribed as a preliminary condition the reduction of armaments and the surrender of colonies by European nations. Both Kant and Bentham followed Thomas Hobbes, a deist of the seventeenth century, who did as much to discredit religion and morality as any man of his time. Mr. Hobbes, however, was too frank and honest to offer his scheme in the name of democracy. In truth, he was obliged to confess that it meant subjection rather than freedom, a ruling class and a ruled class, overlords and underlings. It had no place for the rule of the people. Naturally it would breed arrogance and op-

pression on the part of the overlords. Instead of ending war, it would put the war-making power into the hands of war lords. The more the people understood it, the more they disliked it, and in the end they rejected both Hobbes and his league. The newest Godless effort will go the same way if the people come to understand. They will not willingly sacrifice their sacred rights when they know the truth.

The Bible speaks in no uncertain terms. Of old there were various nations on the earth—Philistines, Girgashites, Hittites, Jebusites and what not, quite as good as the Huns, the Japs, the Turks, the Mexicans and others of this day, and God said to such as were willing to hear: "Thou shalt make no league with them." The command was as clear as any law in the Decalogue. It was repeated with solemn warning, God stooping to explain that such a league would bring them into trouble. By deception they were led to disobey, and it was the beginning of the end, as every honest student of the Old Testament is bound to admit. The second chapter of Judges contains part of the pathetic record of disobedience and disaster.

George Washington got wisdom from the Word of God, and he warned his beloved people against entangling alliances abroad. And it is confidently believed that the average American voter cannot be beguiled into repudiating the Word of God, and his own recent experiences, and the voice of history, and the teaching of reason, and the dictates of patriotism. It is confidently believed that the average American citizen does not feel that he is called to regulate the whole earth. It is confidently believed that the average American voter has sense enough to attend to his own business and let other people's business alone.

Propaganda for the League of Nations.

HENRY A. FORSTER, Attorney, New York City.

The London periodicals are now discussing the colossal propaganda to put over the League of Nations, which for U. S. A. means "the supreme sacrifice." (See Woodrow Wilson's speech of March 4, 1919.)

In the London Spectator for July 24, 1920, Harvey M. Watts says (page 108), referring to a certain writer's alleged article in Fortnightly Review:

"It is inconceivable that he is accurate, however, in reporting that Great Britain 'has spent billions of dollars in propaganda in America.'"

In the Fortnightly Review, June, 1920, Stephen Graham says (page 882):

"The vast numbers of semi-official propagandists sent to America have done harm. It is commonly said in a random way that Britain has spent billions of dollars in propaganda in America."

The latest I hear from across the silver streak is that the international financiers want the United States of America, with others, to underwrite an international loan of untold billions and apply the proceeds thereof in the first instance to restoring Pan-Germany. Doubtless they will then expect us to furnish a huge army to keep the reported Pan-Germany from renewing the war?

If Pan-Germany is restored by the United States of America, may not the international financiers then expect to make themselves billionaires by the restoration in value of depreciated securities which they now hold?

To Build \$3,000,000 Iron Works at Louisville.

Increasing demands for its product have resulted in a decision by the Ewald Iron Co., Louisville, Ky., to build a \$3,000,000 plant succeeding its present works. The buildings will be of steel fire-proof construction, to include the installation of iron furnaces with rolling mills, for an annual capacity of 50,000 tons of refined charcoal bloom hammered iron for locomotive construction. There are four mills, with annual output of 12,000 tons, in the present plant, and the new establishment will have eight mills, each having twice the capacity of the present mills. Twenty acres of land have been secured as site, and the completed new plant will employ 1000 men, the present establishment having about 400 on its payroll. R. Baylor Hickman, president, and H. E. Pierce, general manager, are actively engaged in completing details for the Ewald Iron Co.'s new plant.

Protective Tariff Strongly Favored by Tobacco and Peanut Growers of Virginia and North Carolina

[Special Correspondence Manufacturers Record.]

Richmond, Va., August 20.

Ten years and more ago the cigarette manufacturers of this country commenced to put out and to advertise extensively the Turkish blend cigarette. Previous to that time all cigarettes manufactured in the United States were made entirely of the bright tobacco that grows to perfection in Virginia and North Carolina. Too strong when used alone, it was found that, blended with the Virginia-Carolina bright, the Turkish leaf gave greater satisfaction to the smoker, and the "Turkish Blend" soon became popular, so that within two years the importations of Turkish leaf to be blended with the Virginia brights in cigarettes became enormous.

About this time the prices paid to the growers for the cigarette-making, Virginia-Carolina bright tobacco commenced to decline, and finally got down so low, less than \$10 per hundred pounds, that there was but little profit to the grower in its cultivation.

Just how much the introduction of the Turkish material into the manufacture of the cigarette had to do with reducing the value of the bright leaf it would be hard to tell, but the farmers as well as the leaf dealers in Virginia became convinced that it had pretty much all to do with it.

Under the circumstances these farmers and leaf tobacco dealers commenced to do a little thinking for themselves instead of delegating it to the politicians. They were not long in reaching the conclusion that they were not as rantankerous free-traders as the stump speakers and politicians had been making them believe they were, and that the Bull Mitchell doctrine that "it is wise to be a high protectionist when I am protected" was sound. They wanted a high protective tariff levied against Turkish tobacco, so high as actually to prohibit its importation.

When the last Republican high-protection tariff bill was under discussion in Congress a meeting was held in Danville, the center of the bright tobacco belt. It was held under the joint auspices of the Danville Tobacco Board of Trade and the Danville Chamber of Commerce, and was largely attended by tobacco dealers and by tobacco growers of the surrounding country, who had been specially invited to be on hand. Vigorous resolutions, going back totally on the past "tariff for revenue only" record of the resolvers, were passed and a delegation was sent to Washington to interview the Congressional committee and do all in its power to have the committee include in the bill under consideration a clause imposing a high duty on Turkish tobacco. The delegation was headed by the late R. L. Dibrell, who was at the time the president of the Danville Tobacco Board of Trade, and several prominent bright tobacco growers were included in its membership.

At that period in the history of the country Southern delegations had very little influence with Republican high protectionists. The members of the committee of that stripe were rather inclined to laugh at the delegation, and did poke fun at Chairman Dibrell about changing his views on tariff and protection so promptly when his own interest was at stake.

On the same train which bore the Danville tobacco delegation into Washington there was another delegation from Tidewater Virginia, headed by Mr. Purnell Fleetwood, then and now the president of the Bank of Waverly, in Sussex county. This delegation was from the peanut-growing section of Virginia, and its mission was to have a high protective tax laid on the peanuts imported from other nations and from the isles of the sea. The two delegations were heard the same day, and both were given the laugh, especially when their Congressmen, who had piloted them to the committee-room, stated, in answer to questions, that they, being Democrats and free-traders, would vote against any tariff bill the Republicans brought forth with or without tobacco and peanut protection.

Both delegations went home disgusted and well aware that the new tariff bill, to be reported later by the committee, would furnish no protection against Turkish tobacco or peanuts from foreign sources. No more pilgrimages were made to Washington, but the tobacco growers, and the peanut growers also, kept on doing a lot of thinking.

The increased and constantly increasing consumption of the

cigarette augmented the demand for the Virginia-Carolina bright leaf, and prices advanced somewhat, so that just before the breaking out of the World War the average for the cigarette-making grades in the Virginia and North Carolina markets was something over \$15 per hundred, and that figure insured the grower a fair profit, the high cost of living, the scarcity of labor and its high cost being then negligible quantities. The farmers said no more about prohibitive tariffs against the Turkish tobacco.

Then came the war, and prices for everything, including tobacco, became inflated. The war also shut off the importation of many things, including Turkish tobacco for cigarette-making or "blending." The consumption of cigarettes kept right on increasing by leaps and bounds and the farmer kept getting bigger and bigger prices for the bright leaf with which to make them. The cigarette-making tobacco of last year's crops in Virginia and the Carolinas averaged something like \$60 per hundred pounds, and the growers of those crops have just been coining money.

But, the war being over, Turkish tobacco can come into this country at will, and the farmers have observed that the Turkish blend cigarettes are again getting on the market, and the manufacturers are advertising them extensively. They, or a great many of them, think it is only a question of time, and a short time at that, when the imported Turkish tobacco will again be playing havoc with profits on the cultivation of the bright cigarette-making leaf. They are discussing the matter in their farmers' meetings, and the idea is not to wait until they are actually burned before seeking relief, but to be up and doing in ample time, the purpose being to put an embargo on the Turkish tobacco before it can do its work in reducing the value of their now very high-priced bright leaf. They are putting searching questions to candidates for Congress and at least one Virginia candidate in whose district several million pounds of bright tobacco are grown, has committed himself to high protection for the grower of Virginia bright tobacco, protection against the Turkish leaf and the Turkish blend.

Truly things are not as they used to be, and down here in Virginia there is some real reconstruction going on. No one need be surprised if at least four of the Democratic Congressmen who speak in the next National lawmaking body for Virginia constituents will declare themselves "reconstructed" and cry out for protection by the prohibitive tariff method. It is needless to add that two of these will hail from the bright tobacco belt and the other two from the peanut-growing section of the State. It need not be a surprise if they are reinforced by four more Democratic protectionists from the Old North State.

DRASTIC REDUCTION IN COTTON ACREAGE PROPOSED.

American Cotton Association to Urge Heavy Planting of Food and Feed Crops—Present Price of Cotton Means Serious Losses to Planters.

St. Matthews, S. C., August 21.—[Special.]—In response to urgent requests from every section of the cotton belt, a call has been issued by President Wannamaker of the American Cotton Association for a convention of the national board of directors, finance and executive committees and members of the association, to be held in Montgomery, Ala., September 1, 2 and 3, for the purpose of recommending a minimum price for cotton and cottonseed and of forming plans and waging a campaign in every section of every county and parish in the cotton-producing States for planting the largest acreage in small grain this fall, and food and feed crops next spring, ever planted in the history of the South, it being decided to follow this course after investigation as to the needs of the world for food and feed crops.

On account of the enormous shortage of labor in the South, this will enable the cultivation of these crops to advantage, as they require far less labor and expense in cultivation and do not embrace the great hazardous risk in production that cotton does.

Systematic efforts will be put into force that will assure the

absolute certainty of the largest reduction in cotton acreage for 1921 ever made in the South.

The National Finance Committee, of which Mr. B. F. McLeod of Charleston, S. C., is chairman, with representatives from every cotton-producing State in the Union, will meet with the National Executive Committee on September 1 and prepare a detailed report to be submitted to the National Board of Directors when that board convenes September 2.

On account of the enormous increase in the scope of the work of the American Cotton Association, the board of directors will subdivide and systematize the work into various departments, electing one of the most prominent and successful men of the South as vice-president and general manager. They will also elect experts to head the various departments, each with a full working force, so as to absolutely assure the fact that the American Cotton Association will become a powerful and potential factor in the agricultural and commercial life of the South and assure the placing of the handling and marketing of the American cotton crop upon an efficient and economical business basis.

The report of the special committee on co-operative marketing will be given special consideration at this convention, and plans will be put into effect and force to assure the uniform adoption of the co-operative plan for handling and marketing the cotton crop throughout the entire cotton belt, thus absolutely assuring the handling and marketing of the American cotton crop upon a strictly efficient and economic business basis; the erection of sufficient warehouses in each and every county and parish to warehouse the cotton produced therein, the cotton moving from the ginhouse to the warehouse and the sale only being made when the minimum price recommended by the American Cotton Association has been reached, thus assuring the producer a profitable price for his cotton, based upon supply and demand and the cost of production.

The committee on the cost of production reports that, even with ideal harvesting weather, this will be by far the most costly crop ever produced. Prices being now quoted on the exchanges are far below the cost of production.

It will also be recommended that low-grade cotton be not harvested, but be permitted to remain in the fields for fertilizing purposes and for the purpose of feeding cattle. This recommendation will receive the most careful consideration of the convention, and definite plans will be formed as to the best course to pursue, so as to assure the absolute certainty of all low-grade cotton being left in the fields ungathered.

The South is thoroughly organized. It is aroused as never before. It realizes that, regardless of the fact that the manufacturers, world-wide, have made enormous earnings, and regardless of the fact that there is a great shortage of raw cotton, the South is facing a crucial period in its commercial life and that there is a concerted effort to beat down the price of cotton.

Telegrams and letters are being received showing that the convention will be largely attended.

The Cotton Movement.

In his report of August 20, 1920, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 20 days of the season was 157,000 bales, a decrease from the same period last year of 63,051 bales. The exports were 102,002 bales, a decrease of 181,835 bales. The takings by Northern spinners were 36,349 bales, a decrease of 56,374 bales; by Southern spinners, 122,027 bales, an increase of 3882 bales.

Texas Building Many New Cotton Compresses and Gins—No Immediate Improvement Expected in Cotton Oil Prices.

Austin, Tex., August 21—[Special.]—Many new cotton compresses and cotton gins are being built in Texas this year, due to the promising prospects for a large cotton crop. In West Texas, which has only become a cotton-producing region during the last few years, the demand for additional gins has been very pressing. In some communities it has been found impossible to construct the plants that are needed because of inability to get the necessary equipment promptly. It is estimated that the average yield of the staple in many counties in West Texas will be a bale to the acre. In the South Plains country, where the altitude is about 3000 feet,

the cotton acreage shows an enormous increase this season, and the yield promises to average in excess of a bale to the acre. On account of the high altitude, the crop has never been known to be damaged by any kind of insect pest. Because of the big decline in the price of cottonseed oil, all of the mills are buying as little seed and at as low price as possible. It is stated that the price of cottonseed may show but little improvement soon, despite the efforts that are being made by growers to stimulate the market. The opening price was around \$25 a ton, as compared with \$80 to \$120 a ton last year. In explanation of this low price it is asserted that many of the mills have big stocks of cottonseed oil on hand; that the competition of vegetable oils from the Orient has glutted the markets of this country, and that there is little to be hoped for in the way of any early improvement in the condition.

Standardized House Construction in New Orleans.

New Orleans, La., August 18—[Special.]—Houses are being built in New Orleans at the rate of one a day to meet the shortage of homes for working folk. By standardized methods and machinery-cutting of timber, \$2000 on the cost of construction is being saved.

This is the result of a recent agitation by the Association of Commerce of New Orleans. The Home Construction Co., of which James W. Billingsley, engineer, is the leading spirit, was organized, bought a tract of land near the Foundation Company on the Industrial Canal, and is there developing New Orleans' latest suburb. Twenty-one houses have been erected since the first timbers were brought on the ground, three weeks ago. The timbers for 29 more houses have been cut, and the entire 50 will be ready before the middle of next month.

They are four and five-room cottages, each of a different design, on lots 45x120 feet, and supplied with modern bathrooms, electric light, gas, city water, sanitary sewerage and large closets. The streets are being hard-surfaced, and there are Schillinger sidewalks. Trees will be planted to make the suburb a beauty spot.

A cut-out plant has been erected for sawing the floor beams, joists and rafters to exact sizes and shapes. Window and door frames are made on a wholesale scale. Foundation blocks are cast in concrete. Standardization has been reduced to such a science that with the same timbers houses of many different designs may be built. This relieves the monotony so characteristic of the cheaper houses of New Orleans.

The price at which four-room cottages will be sold ranges from \$4525 to \$4750, and of five-room cottages, \$5500 to \$5825. The financial plan provides for a loan of \$3600 from a homestead, leaving a balance of about \$900 for cash payment. The homestead loan would be repaid at the rate of \$36 a month. In deserving cases an initial payment of \$400 will be accepted, the Home Construction Co. accepting a second mortgage for the balance.

"Southern Field" Being Published Again.

The first issue of a new series of "Southern Field" has just been published by the Southern Railway System. Prior to the Government taking over the railroads this publication was issued regularly by the railway company for the purpose of calling special attention to opportunities existing along its line for industrial, agricultural and general development, and each issue carried not only facts of this kind, but also interesting illustrations and articles about established industries and their activities, new ones being built, and likewise gave illustrations of important construction work going on in the territory covered by the road.

The issue just published is alive with many illustrations of important Southern industries at various points on the Southern Railway, and the wide scope of those illustrated is an evidence of the potentialities and developments of the Southern Railway territory. Before the Government took over the railroads the Southern Railway had quite an extensive industrial and agricultural department. Much of this work was interfered with during Government operation, but with the return of the railroads to private operation this work has been considerably expanded, indicating that this company will again aggressively emphasize the possibilities for development in its territory.

This work is carried on by the Southern Railway Development Service, under the direction of J. C. Williams, manager, with offices in Washington, D. C.

Southern Ports to Profit from Shipping Board Policy

PORT OF CHARLESTON WELL EQUIPPED TO TAKE CARE OF INCREASING VOLUME OF FOREIGN TRADE.

By ALBERT J. STOWE, Secretary Chamber of Commerce, Charleston, S. C.

In recent assurances that the Shipping Board policy is to be one abetting expeditious distribution of foreign traffic through a wide range of the country's ocean gateways, Southern ports find much encouragement for further development of their harbor facilities. It is extremely gratifying to feel that, in so far as possible, a fair field for competition among the ports may be depended upon.

Few ports in the United States have taken a keener interest in urging the country to realize fully its huge advantage in having a great number of seaports available for foreign freight than Charleston, S. C. It glories in the fact that America is beginning to realize this advantage and profit from it by devoting greater attention to increasing the nation's foreign trade.

Charleston interests feel that they have salient features by way of natural advantages and modern facilities, which mean much in handling the steadily growing volume of foreign trade. With artificial traffic barriers that in past years have held in check the development of all Southern ports now definitely removed through establishment of equitable export freight rates, indications favor a complete utilization of Charleston port advantages to the full measure of their worth.

Among its harbor facilities which can be brought to play in competing for freight, Charleston has a splendid advantage in the Government port terminals, which were built during the war emergency at a cost aggregating \$17,000,000. Construction of these was not completed, unfortunately, until after the signing of the

armistice, yet they were utilized by the Government to big advantage, even before they were declared finally finished. For instance, records of the War Department show that from March 27, 1919, to July 10, 1919, approximately 50,000 troops were disembarked at Charleston from 17 different transports ranging from 3964 to 11,496 deadweight tons.

This is logical evidence that the river is sufficiently deep for a great tonnage. The channel from entrance of the harbor to the port terminals, a distance of about 15 miles, is 30 feet at low water. There is a rise of tide at Charleston of 5.2 feet. Recently the steamer Edgar F. Luckenbach arrived at the port drawing 31 feet 6 inches of water, loaded with 12,000 tons of nitrate of soda from Chile. This ship discharged her cargo at the Government terminals.

At the hearing before the Senate Committee on Commerce, on February 3, 1920, Major-General Frank T. Hines, Chief of the Transportation Service of the War Department, submitted a summary of data regarding the Army Port Terminals, which is published in full in the report of the committee for that day. The information covering the Charleston terminals appears on page 872, as follows:

GENERAL STATISTICS.

- (a) Location, Cooper River, south of Goose Creek.
- (b) Open storage space in square feet, gross, none; protected storage space in square feet, gross, 1,804,900; total storage space in square feet, gross, 1,804,900.
- (c) Total acreage of terminal, 1090.
- (d) Maximum storage capacity in tons, 300,000.



UNLOADING POTASH IN BAGS AT ARMY SUPPLY BASE, CHARLESTON, S. C.

- (e) Maximum freight-handling capacity per diem of 10 hours, expressed in tons or cars, 2400.
- (f) Terminal trackage, miles, 32,550.
- (g) Capacity of terminal yards in cars, 2000.
- (h) Berthing space, linear feet, excluding ordnance wharf, 3575; including ordnance wharf, 2000. (Evidently clerical error.)
- (i) Depth of water at mean low water at wharves 35 feet.
- (j) Cost of project per square foot, including sheds, \$8.95; including sheds, \$11.
- (k) Rental rate per square foot charged tenants, excluding sheds, 53.7 cents; including sheds, 66 cents.
- (l) Cost of real estate, \$550,000.
- (m) Cost of construction work, \$14,450,000.
- (n) Total cost of entire project, \$15,000,000.
- (o) Allotment for entire project, \$12,675,000.
- (p) Date of commencement of work, June, 1918.
- (q) Date of completion of work, July, 1919.
- (r) Enumeration of principal structures: Six warehouses, numbered from 1 to 6; two headhouses, 1 and 2; two open sheds, 1 and 2; one bulkhead wharf; one ordnance depot wharf; railroads, etc.

The Army Terminals are to be opened up for commercial uses, and the steamship lines or others desiring to use the facilities may obtain them by making application to the post commandant and filing a bond for \$25,000 to protect the Government in case of damage to its property.

Local municipal government will soon come into full possession of its waterfront through a deal which has practically been completed. The transaction will result in purchase by the city of properties now owned by the Charleston Terminal Co. It is definitely understood that very comprehensive and far-reaching plans for the development of this waterfront are proposed by the city authorities.

According to figures obtained from the Collector of Customs, exports and imports through the port of Charleston were valued at nearly \$44,000,000 for the fiscal year which ended at midnight June 30, 1920. Tonnage of vessels using the harbor, although the figures are not yet available, aggregated more than in any previous year in the history of the port.

The exports for the year, consisting mainly of cotton, coal and fertilizer, amounted to \$32,583,920.

Imports, with fertilizer materials as the leading item, were valued at \$11,298,730.

In June just ended the exports from here amounted to \$1,581,792, and the imports through here \$1,874,064. Both of these figures had been exceeded by previous months of the same fiscal year. The record month in exports was November, when the figure was \$11,037,922, while for imports March holds the yearly record with a total value of \$2,692,105, May being a close second, with \$2,688,687.

With war conditions held responsible, exports through here during the previous fiscal year ending June 30, 1919, were valued at less than one-tenth of the value of the 1920 exports, \$3,041,315. Imports that year made a better showing, with a total value for the 12 months of \$2,439,175.

Five years ago, in 1915, the value of exports was \$13,015,226 and of imports \$2,784,421.

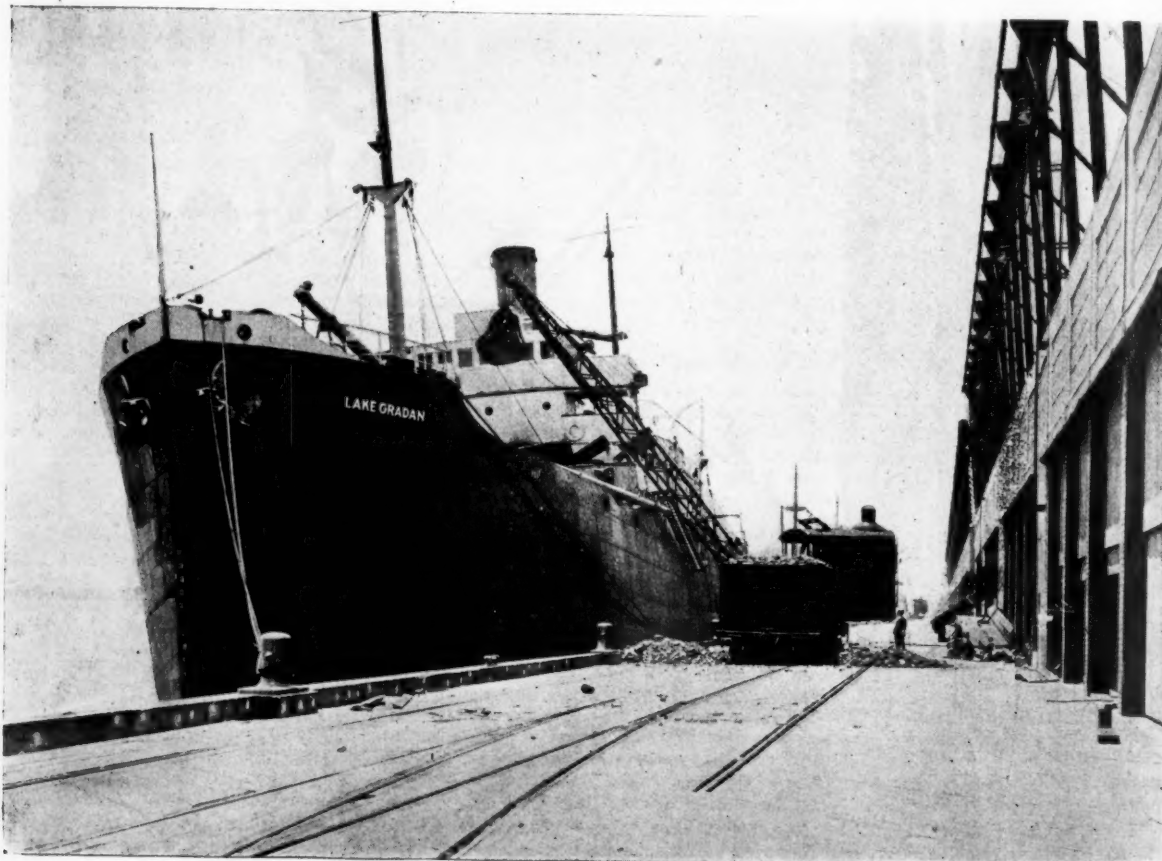
Five years before that, in 1910, the value of exports was \$8,104,821 and of imports \$5,226,525.

The foreign trade of the port and its growth is reflected in the figures showing the number of vessels entering from foreign ports and clearing for foreign ports. There were 259 entries from foreign ports in the fiscal year just closed, compared with 115 in the preceding year. Of clearances for foreign ports last year there were 238 from here, whereas the year before there were 92.

In the coastwise trade there were 128 entries and 143 clearances last year.

The effects of the war on the American merchant marine are shown in the figures of vessels entering here under the American flag and those under foreign flags. In 1914 six steamships flying the American flag entered at the Charleston custom-house. Eight schooners of the same registry made the total number of vessels entering here under the Stars and Stripes in 12 months, 14. The total number of vessels that entered that year was 154, so less than 10 per cent of the commerce of the port was carried in American bottoms.

In the year just closed there were 184 entries here of American vessels from foreign ports, which is more than 60 per cent of the total number of entries.



S. S. LAKE GRADAN COALING WITH RAILROAD CRANE FROM CARS AT ARMY SUPPLY BASE, CHARLESTON, S. C.

The Rise, Decline and Rebirth of Hopewell, Va.

STRIKING STORY OF THE GROWTH OF A SOUTHERN INDUSTRIAL CITY, THE SLUMP WHICH CAME WITH THE ARMISTICE, AND THE PRESENT NEW AND PERMANENT DEVELOPMENT.

[Special Correspondence Manufacturers Record.]

Hopewell, Va., August 20.

One of the most interesting developments in the South today is the effort being put forth by the Du Pont Chemical Co. to convert the huge munition plant, operated during the war by the Du Ponts, into a peace-time industrial city. The story of the rise, decline and rebirth of Hopewell, Va., furnishes one of the most romantic incidents in the annals of American business.

Hopewell was established in 1613 at the mouth of the Appomattox River, on the south side of the James River, in Prince George county, about nine miles northeast of Petersburg, Va. In 1912 it boasted a population of 500 and a traditional history of having been destroyed by the Indians, burned by the British in the Revolutionary War and used as a base headquarters by General Grant in the Civil War.

In this latter year the Du Pont Company, attracted by its excellent rail and deep-water transportation possibilities and favorable railroad rates, purchased about 800 acres of a farm which had for generations formed a part of the Epps estate. By 1914 a good-size dynamite plant was ready for operation to supply dynamite for the Southern territory and export shipment. When the war broke out, the Du Pont Company received huge orders for smokeless powder from the British and Russian governments. Hopewell was a logical location for the manufacture of the guncotton necessary for smokeless powder. An additional 1600 acres were immediately purchased and extensive plans were drawn up for the adaptation of the whole property to the manufacture of guncotton.

Within a year Hopewell became the largest guncotton plant in the world. Eighteen thousand men and women, necessitating a monthly payroll of over \$2,500,000, were employed. During operations as much as 1,000,000 pounds of raw cotton and 200,000 pounds of Chilean nitrates were used in a single day. Forty to sixty cars of coal were consumed each day in the modern power-houses. From 50,000,000 to 65,000,000 gallons of water were used in the cotton purification plants.

During the war, 1,500,000,000 pounds of guncotton were shipped to munition factories in this country and to the Allies.

To take care of its employees, the Du Pont Company built an entire city. At the date of the signing of the armistice, Hopewell itself had a population of approximately 35,000 people. To accommodate the workmen and their families the Du Pont Company erected houses, dormitories and hotels, restaurants, churches, clubs, an ice plant and central steam plants; it laid out streets and sidewalks, put down water and sewer lines. It established a commissary, that its employees might buy food at as near cost as possible. Hopewell became a hustling, wide-awake city. It gained for itself the reputation of being a good place in which to live and work. So pronounced was this feeling of good-will toward Hopewell that when the guncotton plant was closed, in November, 1918, thousands of workmen left their families to live in Hopewell while they went elsewhere to seek work. Many of these families, after a lapse of nearly two years, still retain their homes in Hopewell.

When the armistice was signed the withering hands of fate seemed to strangle the last vestige of life in the bustling city of Hopewell. Hopewell's friends, literally in tears, saw the tremendous plants closed and the employees leave; they saw the merchants and the business people close their places of business and board up their windows. Within a month Hopewell was again a deserted village. It still had its beautiful streets and its houses, its wide-flung factory and welfare buildings, but life was gone. The news came out that the Du Pont Company had sold the plant to the Du Pont Chemical Co. to be wrecked. The friends of Hopewell, however, could not see it pass away; they realized that here was still the latent possibility of a real city. These friends of Hopewell, in conjunction with the officials of the Du Pont Chemical Co., developed a plan whereby the work of thousands of men and the material which had cost millions of dollars should not disappear under the wrecker's hammer; they determined that Hopewell should be again a great manufacturing city.

Technical, sales and advertising experts were employed to make

a complete survey of the plant. They had not gone far, however, when they realized that they were traveling on an uncharted sea, that never before in the history of business had an entire city been offered for sale. They realized that they could not approach this problem in the same way that a chamber of commerce attempts to attract manufacturers to a community. Here they were not only selling manufacturing buildings and land, but also the houses and streets and community centers. They could not offer buildings and land free. If they were going to make this a permanent place, populated only by permanent manufacturers, they could not afford to locate within the city any but reliable going concerns, whose growth and prosperity could be only a question of time.

After months of preparation and study, a nation-wide advertising campaign was launched, a large sales organization was trained and the technical experts were prepared to give advice and counsel on every conceivable phase of our industrial life. There were power and electrical men, mechanical, chemical and civil engineers, production and efficiency engineers. The salesmen were of a wholly new type, developed and trained for this specific purpose. A financial expert was employed to give financial advice to those who deserved it and to ward off and eliminate the "fly-by-nights."

The first advertising appeared in November, 1919, in the New York, Philadelphia and Chicago newspapers, in the MANUFACTURERS RECORD and in two other weekly publications of national circulation. On December 2 an old-established tool-manufacturing company from Massachusetts purchased the first piece of property at Hopewell, for the manufacture of tools for its Southern and export trade. Following in the wake of this company, 24 manufacturers have located in the Hopewell Industrial District, 11 of whom were placed on the former munition plant.

The total capitalization of the companies that have already located on the plant proper will equal \$17,500,000; their investment in plant alone will total \$7,550,000. They will employ, when in full operation, from 8000 to 10,000 men and women.

Two outstanding features in connection with this development should be of intense interest to the whole of America:

First—This development has demonstrated beyond the shadow of a doubt that the tremendous plants and villages that were originally built exclusively for war work are adaptable to many lines of industry. In fact, a pottery company which came to Hopewell found buildings which checked almost to the fraction of an inch with the plans and specifications which their engineer had laid out for an ideal pottery plant. They found on the plant, among the surplus, 80 per cent of the machinery required to equip this plant; in fact, in one section of their plant 98 per cent of the material came directly from this war surplus. Under a filter press in a certain part of their operation they required two concrete drain 18 inches deep, 30 inches wide and separated about 6 inches. Much to their astonishment, they found in the buildings which they had selected the identical drains placed in the identical position which they required. A paper plant, by making a few changes in several of the buildings, is able to utilize them in their entirety for the cooking of paper pulp. An artificial silk plant found, at a cost of approximately \$250,000, equipment and buildings which would have cost them in the open market approximately \$1,000,000.

The second feature, and the one that ought to be most interesting to all readers of the MANUFACTURERS RECORD and to all those who are interested in the development of our great South, is the fact that such a variety of industries have selected a Southern town as an ideal location for their operations. Every industry which is located in this new industrial district has come because there are an adequate and close supply of raw material and ready access to the markets for their finished products. They found excellent transportation facilities, a climate where work can continue during every month of the year, and large numbers of con-

tented American men and women workmen, both skilled and unskilled.

A mere glance through the following list of the industries will show the variety of the products which are to be manufactured:

Industries which have located in Hopewell district and product to be manufactured:

Hopewell Trunk & Bag Co., trunks and bags.
Mayhew Virginia Corporation, mechanic's steel tools.
Imperial Bagging Co., reclaimed bags.
Camp & Harman, dry cleaning.
Hopewell China Corporation, chinaware.
Hopewell Insulation & Mfg. Co., high-tension insulation.
Special Products Co., cotton and wool waste.
Tubize Artificial Silk Co., artificial silk.
Miracle Company, dishwashing machines.
The Stanscott Company, paper pulp from cotton linters.
Hummel-Ross Fiber Corp., paper and paper board.
J. Cohen & Son, overalls.
Hopewell Sheet Metal Works, sheet metal.
Morris Wagon Mfg. Co., wagons.
Petersburg Silk Hosiery Co., silk hosiery.
McCawley & Co., men's shirts.
Spottswood-Allison Corporation, trunk locks.
Atkinson & Long, trunk hardware.
Alfred Friend Trunk & Bag Co., trunks and bags.
Titmus Optical Co., optical lenses.
International Filler Corp., bottling machines.

Perhaps the most graphic illustration of what Hopewell was and is can be seen in the story of a man who has just visited Hopewell. We writes:

"During 1917 I was called to Hopewell on business, and for the first time saw the great munition plant. I found a town containing several square miles, covered with what were obviously brand-new houses, occupied by men and women from every part of the country. They were all 'going some place,' and I thought to myself that if New York is the great melting pot of the world, then surely Hopewell was bidding fair to be considered the melting pot of America. In the business section, the poolrooms, dancing halls and soda fountains did a flourishing business from early in the morning until midnight. The people who gathered at these places were happy, care free and orderly. The air of the whole place was that of a mining town without the usual lawlessness.

"Once again I visited Hopewell in May of 1919. A more desolate and deserted place I never saw. The grass was growing up in the streets, the lawns in front of the houses were overgrown with weeds, the streets were rapidly disintegrating, the stores were boarded up and a 'For Rent' or 'For Sale' sign decorated practically every building in the town. The trolley which serves the town looked more like the 'Toonerville Trolley' than a real public conveyance.

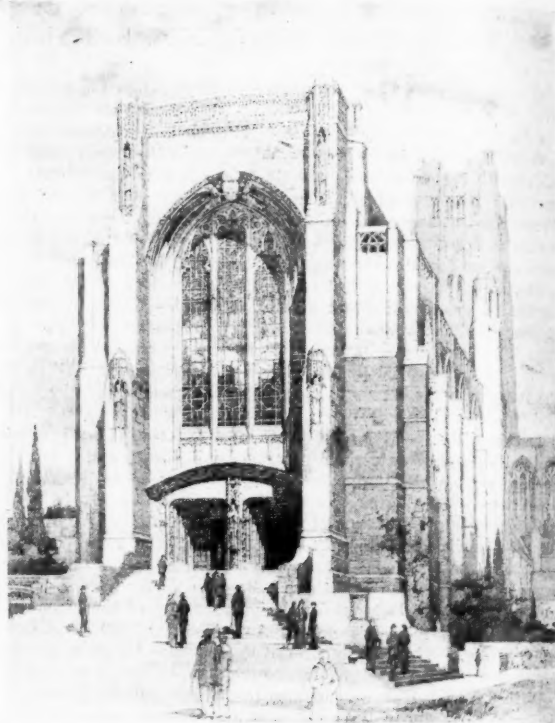
"I was down in Petersburg in July of this year; some of my friends asked me to go out and see Hopewell. If my astonishment was great at the decline of Hopewell, it was certainly greater at its rebirth. The houses had been repainted; the lawns were cut; the streets were clean and in good repair; the stores were open and apparently doing a good business; the streets were again filled with people, and while there weren't so many as during my first visit, they were just as happy, just as contented and just as American. A short distance from the main street I saw what was evidently a pottery plant in full operation. Steam was again shooting from one of the big steel buildings. From the stacks of the largest power-house in the plant smoke was pouring. A large hotel which was used to house the single men when the munition plant was operating had been opened, two large flourishing club-houses were going full blast, and automobiles on the street were more common than people a year ago. In front of the hotel I saw cars ranging from the ubiquitous Ford to an occasional Pierce-Arrow. In fact, the whole place had the appearance of a hustling little community."

The city of Hopewell has grown from a population of 2500 in November, 1919, to a present population of 7500. This industrial campaign is continuing, and its promoters believe that when they have completed their development work Hopewell will again be a city of 35,000 people.

Public Utilities Commission Planned for Texas.

Austin, Tex., August 19—[Special.]—In an effort to obtain the enactment by the Legislature of a public utilities law that will meet the support or endorsement of various interests concerned, Governor W. P. Hobby has appointed a committee to draft the proposed bill which will be submitted at the next regular session of the Legislature in January, 1921. The League of Texas Municipalities, which is composed of the mayors and other officials of the different cities and towns of the State, is back of the movement to create a Public Utilities Commission.

SYNOD HALL, FIRST CATHEDRAL GROUP UNIT



Contract has been awarded to Morrow Bros. of Baltimore for excavation and foundation work on the above structure, the first unit of the Protestant Episcopal Cathedral of Maryland. Contract will be let later for the building itself, which is to cost about \$330,000.

British Coal Industry Facing Serious Competition.

London, England, August 6—[Special.]—The American Chamber of Commerce in London understands that so much local unemployment has been caused and so many ships laid up by the Government restrictions on coal exports that representations have been made to the Coal Controller urging either the lifting of the embargo or a large increase in the quantity to be exported.

Some interesting figures as to the world's output of coal have just been issued, says the American Chamber, showing that production during 1919 was lower than any year since 1910, a decrease of 171,000,000 tons being recorded as compared with 1913. America is the only country to show an increase.

Nearly a third of the decrease is attributed to Great Britain, where the output is now less by 47,000,000 tons than in 1913, in spite of the fact that 90,000 more men are employed in the industry. Each increase of wages has so far been accompanied by a reduction in output, and the miners are believed by many people to be deliberately restricting output as part of a plan to force nationalization of the mines.

The entry of America into the coal-exporting trade is followed by the information that China is also entering and may become a serious factor. The fact that American coal can be bought and shipped to Europe at a lower cost, including transport, than British coal, is seriously affecting British trade, since this means that even when there is British coal available for export, the price is so high in comparison with foreign coal that naturally the purchaser takes the foreign in preference to the more expensive British.

Comparison of output between the two countries shows striking results, as the American Chamber points out. The total output of coal in Great Britain is at the rate of 240,000,000 tons a year, while in the United States output for 1918 was 621,000,000 tons and during 1919 was 494,000,000 tons, the decrease in that year being attributed to the great strike.

THE PROTESTANT EPISCOPAL CATHEDRAL OF MARYLAND.



Work has begun on Synod Hall as the first unit of the above magnificent group of cathedral buildings which will be erected in Baltimore. These buildings will be many years in construction and represent an ultimate cost of \$5,000,000 or more. The site is at Charles-Street Boulevard, University Parkway and Greenway, Baltimore. The architect for the group is Bertram G. Goodhue, New York.

\$1,000,000 Asphalt Refinery Under Construction.

Daugherty, Okla., August 21—[Special.]—Civil engineers and chemists employed here in a million-dollar construction project for the Continental Asphalt & Petroleum Co. of Oklahoma City assert that this is the only place in the United States where three essential grades of asphalt for road-building purposes are found in convenient proximity.

The grades are limestone asphalt, sandstone asphalt and liquid asphalt. The first is too hard for road surfacing and the second is too soft. Accordingly, the Continental is having constructed here a refinery that will blend the two with liquid asphalt in proportions that will make the composite ideal for road building. The refinery, said to be the only one of its kind in the Southwest, will contain some pieces of machinery manufactured specially for the Continental. Among them is one for taking the lubricating oil out of the liquid asphalt. Officials of the company believe that this product will bring enough revenue to pay operating expenses of the plant.

Liquid asphalt is found at 1200 feet below the surface. The driller who discovered it, while knowing nothing of the depth or area of the lake, believes that the well will make 200 to 400 barrels daily. The production doubtless will be sufficient for the plant's capacity at least during a period of several months. Surface indications are that a large scope of country here is underlain with this lake.

The Continental company, after completing a short-line railroad from Daugherty to the eastern side of its property, began several months ago operation of its sand and gravel plant, one of the

largest in the State and having an almost inexhaustible supply of these necessary building materials. Operation of the sand and gravel business has necessarily been under capacity because of lack of transportation facilities. Orders are now on file for 900 cars.

A cement mill is yet to be completed by the Continental at the foot of a solid mountain of limestone.

Robert W. Dick, secretary of the company, predicts that when business conditions are again on a stable basis the Continental will extend its railroad eastward from Daugherty to connections with the Frisco, M. O. & G. and M. K. & T. railroads, and possibly westward to a Rock Island intersection. The eastern extension is likely to have the Coal county coal fields as an objective, which would further warrant building west to the Rock Island.

In this huge enterprise Roy E. Stafford, for many years president of the Oklahoma Publishing Co. and editor of the Daily Oklahoman, and Judge Jean P. Day, formerly a member of the Oklahoma Supreme Court, are active officials. R. E. Seamans of New York city also is an official.

Farm Machinery, Automobile Accessories Wanted.

JOSE MULLAN MARTINEZ, Huelva, Spain.—I am extremely interested in bringing about the establishment of a company for the importation of American machinery for vine culture and wine-making machinery for general agricultural purposes; old-fashioned plows drawn by horses, and tools; automobile and motorcycle accessories and tools for same; pneumatic tires for same; spare parts for same, and all articles that pertain to this branch of industry. I am also interested in canvas for sails and thread and cords for fish nets.

Louisville's Present Industrial Development Said to Be Greatest in Its History and Due in Large Measure to Prohibition—Former Distillers Engage in Many Different Lines of Activity.

Louisville, Ky., August 21.—[Special.]—The great fund of capital invested in the distilling industry in Louisville in bygone days is becoming a potent factor in the development of the Kentucky metropolis in other lines of manufacture. This is one of the outstanding features of Louisville's present growth. Not only millions of capital formerly invested in distilling and subsidiary industries is finding its way into new forms of industry in Louisville, but men once the heads of the whisky manufacturing business there are rapidly taking official positions in other industrial corporations.

At the offices of the Louisville Industrial Foundation, the Board of Trade's million-dollar factory promotion corporation, it is pointed out that many distillers have already invested heavily in new and old Louisville factories, and that a large number of others are seeking to invest in legitimate and promising enterprises in need of new capital.

Some of the industrial enterprises which Louisville distillers have launched since their business was terminated by Federal enactment need only to be pointed out to show the transition in the manufacturing growth of the city that has been created by the abolishment of what was formerly Louisville's second industry in point of value of manufactured product.

Henry W. Imorde, former secretary of the Reagan & Imorde Distilling Co. is now president of the \$535,000 Stimpson Computing Scale Co., one of the city's thriving new industries engaged in the manufacture of scales, which he helped launch.

Peter Lee Atherton, formerly one of the heads of the Atherton distilling interests in Kentucky, has become the head of the Prestonia Manufacturing Co., a new \$1,000,000 corporation engaged in the manufacture of graphophone cabinets. He was a leader in organizing this company.

R. E. Wathen & Sons, who once advertised as "a family of distillers for more than 100 years," are devoting most of their time to the Wathen Milling Co., who advertise their modern new seven-story factory-building as "the Finest Mill in Dixie." Authorities say that nowhere in the country are there finer mill buildings than those of the Wathen Company. R. E. Wathen is president; J. B. Wathen, Jr., vice-president, and O. H. Wathen, secretary and treasurer.

At the head of the new \$5,000,000 Chemical Fuel Co. of America, a Louisville corporation, producing tri-oxylene, a motor fuel advertised as a substitute for gasoline, is W. A. Thomson, whose business prior to prohibition consisted almost wholly in the sale of grain to distillers.

L. Weller & Sons, a distilling corporation formerly owned by B. F. Farnsley and Alexander Van Winkle, have invested \$100,000 recently in the Red Chief Manufacturing Co., and as head officers of that company are taking steps to develop largely both the domestic and export business of its products, corn-shellers, feed grinders, table mill separators and automatic wrenches.

Rosenbaum & Son, once distillers, are now manufacturing clothing under the same name, their company being capitalized at \$60,000.

The J. T. S. Brown & Son distilling interests now have \$80,000 invested in the new Buzz Engineering Corporation, a Louisville factory engaged in the manufacture of conveyors and pumps.

Ed M. Flexner, once president of the Pleasure Ridge Park Distilling Co., is now head of the \$100,000 Can Conservation Co.

W. O. Bonnie, Jr., formerly of Bonnie Bros., distillers, has become head of the \$60,000 Louisville Aluminum and Brass Foundry, who have just opened a temporary plant at Brook street and Eastern Parkway, and expect soon to build a new plant.

The Bonnie Bros. interests are also backing the new Kentucky Color & Chemical Co., which will manufacture pigments for paints, etc.

Owsley Brown, former president, and A. L. Hinz, former secretary of the Brown-Forman Company, distillers, have just launched the Brown-Hinze Auto Co., which plans to begin soon the manufacture of motor accessories.

The Goebel-Marx Furniture Co. is also a new Louisville corporation, started by interests formerly in the distilling business.

A commercial alcohol plant is about to be started by the Ken-

tucky Distilleries & Warehouse Co., in its Melwood plant, which has already been equipped for this purpose.

Louisville brewing interests, while not making so radical a departure as most of their neighbors in the distilling business, are still prospering in lines of manufacture not dissimilar from the old. The Frank Fehr, the Falls City, the Phoenix and other former brewing concerns have changed naturally into soft drink manufactories and cold storage plants. Some are said to have found, to their surprise, that they are doing even a larger business than in the old days, and with more assurance of its continuance, because their future is no longer threatened by public scruples.

Altogether it may be said that prohibition has had a remarkable effect in Louisville, resulting in the greatest industrial development in the history of the city at the present time, due in no small measure to the immense amount of capital that has been released to and is constantly seeking and finding new fields of industry.

Fuller's Earth and Bentonite in Bexar County, Texas.

Austin, Tex., Aug. 5.—[Special.]—Dr. E. H. Sellards, geologist in the Bureau of Economic Geology and Technology of the University of Texas, recently finished an exhaustive survey of the mineral resources of Bexar county, in which San Antonio is situated. The fuller's-earth deposit in that county is of much importance. In a report that he has just issued, Dr. Sellards describes this fuller's-earth deposit and also makes reference to material called bentonite, which is found in that county. The report says, in part:

"The fuller's-earth deposits of Bexar county are being exploited at the present time by but one firm, the Medina Fuller's Earth Co. The deposit that is being mined is located near the headwaters of a small stream north of the Castroville road and west of the Cagnon cross-road, about 16 miles from San Antonio. The plant at which the earth is dried, ground and prepared for market is located in San Antonio, the crude earth being hauled from the pit by trucks. In the pit at the present time there is seen an exposure of as much as 35 feet of workable fuller's earth. The overburden is moderate, consisting of a few feet of soil and gravel.

"The fuller's earth produced by this company is crushed into pieces of moderate size, not exceeding two or three inches in diameter, and is then passed through a rotating drying cylinder to remove the excess of moisture. The clay is then ground and sacked for market. It is said to be chiefly used in clarifying vegetable oils, including cottonseed oil, for which purpose the present practice is to grind the earth to pass a 200-mesh sieve. It is used also in clarifying lard. Aside from the finely-ground earth, a part of the product is ground to a mesh of 16-32-60, the earth of this grade being used for mineral oils.

"In addition to the fuller's earth, there is found in this county also in the upper cretaceous formations the material known as bentonite. The bentonite deposits of this county have been described in a circular previously issued by the Bureau of Economic Geology, and based on the work of C. L. Baker. Part of this circular reads:

"In the course of work in Bexar county, the bureau has discovered a bed of the peculiar clay called bentonite, heretofore known only from Wyoming. Bentonite has the property of absorbing large quantities of various liquid substances. It has a soft, soapy feel, has very little or no grit, and is brittle. Mixed with the proper amount of water, it becomes very plastic; it differs from all ordinary clays or kaolins in being easily fusible at moderate heat.

"Bentonite has been put to various uses. It is used for the manufacture of hoof-packing, a dressing for the inflamed hoofs of horses, and also in the manufacture of a medical dressing, antiphlogistine. Its chief use is to give body and weight to paper. It is also used as soap filler, in the manufacture of high grades of soap; to dilute powerful drugs in powdered form, and as an adulterant in candy. It is a good retarder for use with the hard cement plasters, and would probably make a better absorbent of glycerin in the manufacture of dynamite than the diatomaceous earth now used for that purpose. Owing to its peculiar properties, it is likely to find more extensive and varied use in the future."

Herbert Spencer's Opposition to the Metric System

THE UTTER IMPRACTICABILITY OF THE METRIC SYSTEM OF WEIGHTS AND MEASURES POINTED OUT BY HERBERT SPENCER TWENTY-FIVE YEARS AGO—ITS COMPULSORY ADOPTION TODAY WOULD PRODUCE CHAOS.

By A. V. DRAPER.

It is a matter for concern that the agitation renewed in recent months in favor of the adoption of the metric system as the standard system of weights and measures in the United States should have been waged with sufficient vigor to cause some few newspapers and individuals to believe that there exists a widespread public demand or need for it. Nothing could be further from the truth. The compulsory use of the metric system is not desired even by scientific men throughout the country, and its general adoption would produce a cataclysm in our industrial life such as by comparison would make a close combination of the evils of our present excess profits tax system, the free and unlimited coinage of silver at a ratio of 16 to 1, and public ownership of all our railroads, telegraphs and telephones and other public utilities seem like a salutary and beneficial scheme of industrial progress and development.

This recent propaganda is but a revival of the agitation which has long prevailed in some form in England, and it is well worth while to recall in this connection what Herbert Spencer had to say against the metric fallacy as far back as 1896, when an association was striving to establish the system there on a compulsory basis. Spencer's views on all subjects which he discussed were usually ahead of his time, but they have been generally accepted throughout the world as both sound in principle and fundamental in concept.

Provision for the republication of his pamphlet "Against the Metric System" whenever the issue should again be brought up in Parliament was made in a codicil to his will dated June 19, 1903. In this pamphlet Spencer emphasizes by means of an imaginary dialogue the grave disturbance and confusion certain to result to commerce and trade by the adoption of a system of weights and measures so different from those in general use, and he shows also how the metric fallacy came into being and wherein lie many of its elementary weaknesses. Typical portions of the dialogue are as follows:

Ques. What do you propose to do with the circle? At present it is divided into 360 degrees, each degree into 60 minutes and each minute into 60 seconds. I suppose you would divide it into 100 degrees, each degree into 100 minutes and each of these into 100 seconds?

Ans. The French have decimalized the quadrant, but I fear their division will not be adopted. Astronomical observations throughout a long past have been registered by the existing mode of measurement, and works for nautical guidance are based upon it. It would be impracticable to alter this arrangement.

Ques. You are right. The arrangement was practically dictated by Nature. The division of the circle was the outcome of the Chaldean division of the heavens to fit their calendar, a degree being, within one-sixtieth, equivalent to a day's apparent motion of the sun on the ecliptic. And that reminds me that I do not find in your scheme any proposal for redivision of the year. Why do you not make 10 months instead of 12?

Ans. A partial decimalization of the calendar was attempted at the time of the French Revolution; a week of 10 days was appointed, but the plan failed. Of course, the 365 days of the year do not admit of division into tenths; or if 10 months were made, there could be no tenths of these. Moreover, even were it otherwise, certain deeply-rooted customs stand in the way. Many trading transactions, especially the letting of houses and the hiring of assistants, have brought the quarter-year into such constant use that it would be very difficult to introduce a redivision of the year into tenths.

Ques. Just so; and it occurs to me that there is a deeper reason. Ignoring the slight ellipticity of the earth's orbit, a quarter of a year is the period in which the earth describes a fourth of its annual journey round the sun, and the seasons are thus determined, the interval being the shortest day and the vernal equinox, between that and the longest day, and so on with the other divisions.

Ans. The order of Nature is doubtless against us here.

Ques. It is against you in a double way. Not only the behavior of the earth, but also the behavior of the moon, conflicts with your scheme. By an astronomical accident it happens that there are 12 full moons, or approximately 12 synodic lunations, in the year; and this, first recognized by the Chaldeans, originated the 12-month calendar, which civilized people in general have adopted after compromising the disagreements in one or other way. But there is another division of time in which you are not so obviously thus restrained. You have not, so far as I see, proposed to substitute 10 hours for 12, or to make the day and night 20 hours instead of 24. Why not?

Ans. Centuries ago it might have been practicable to do this, but now that timekeepers have become universal, we could not make such a redivision. We might get all the church clocks altered, but people would refuse to replace their old watches by new ones.

Ques. I fancy conservatism will be too strong for you in another case—that of the compass. The divisions of this are, like many other sets of divisions, made by halving and rehalving, and again halving, until 32 points are obtained. Is it that the habits of sailors are so fixed as to make hopeless the adoption of decimal divisions?

Ans. Another reason has prevented—the natural relations of the cardinal points. The intervals included between them are necessarily four right angles, and this precludes a division into tenths.

Exactly. Here, as before, Nature is against you. The quadrant results from space-relations which are unchangeable and necessarily impose, in this as in other cases, division into quarters. Nature's lead has been followed by mankind in various ways. Beyond the quarter of a year we have the moon's four quarters. The quarter of an hour is a familiar division, and so is the quarter of a mile. Though the yard is divided into feet and inches, yet in every draper's shop yards are measured out in halves, eighths and sixteenths or nails. Then we have a wine merchant's quarter-cask, we have the fourth of a gallon or quart, and, beyond that, we have for wine and beer the quarter of a quart, or half-pint.

The argument continues: Let us look back upon the origins of these systems. Unable to count by giving a name to each additional unit, men fell into the habit of counting by groups of units and compound groups. Ten is a bundle of fingers, as you may still see in the Roman numerals, where the joined fingers of one hand and the joined fingers of the two hands are symbolized. Then above these, the numbering was continued by counting two tens, three tens, four tens, etc., or 20, 30, 40, as we call them, until ten bundles of tens had been reached. Proceeding similarly, these compound bundles of tens, called hundreds, were accumulated until there came a doubly-compound bundle of a thousand, and so on. Now, this process of counting by groups and compound groups, tied together by names, is equally practicable with other groups than 10. We may form our numerical system by taking a group of 12, then 12 groups of 12, then 12 of these compound groups, and so on as before. The 12-group has an enormous advantage over the 10-group. Ten is divisible only by 5 and 2. Twelve is divisible by 2, 3, 4 and 6. If the fifth in the one case and the sixth in the other be eliminated as of no great use, it remains that the one group has three times the divisibility of the other. Doubtless it is this great divisibility which has made men in such various cases fall into the habit of dividing into twelfths, or beyond the 12 divisions of the zodiac and the originally associated twelvemonth, and beyond the twelfths of the day, and beyond those fourths, sub-multiples of 12, which in sundry cases Nature insists upon, and which in so many cases are adopted in trade, we have 12 ounces to the pound troy, 12 inches to a foot, 12 lines to the inch, 12 sacks to the last, and of multiples of 12 we have 24 grains to the pennyweight, 24 sheets to the quire. Moreover, large sales of small articles are habitually made by the gross (12 times 12) and great gross (12x12x12). Again, we have

made our multiplication table go up to 12 times 12, and we habitually talk of dozens. Now, though these particular 12 divisions are undesirable, as being most of them arbitrary and unrelated to one another, yet the facts make it clear that a general system of twelfths is called for by trading needs and industrial needs, and such a system might claim something like universality, since it would fall into harmony with these natural divisions of twelfths and fourths which the metric system necessarily leaves outside as incongruities.

In a letter to a distinguished man of science, who had expressed to him a strong opinion in favor of the metric system, Herbert Spencer wrote:

"From the days when the accompanying memoranda were set down, I have never ceased to regret the spreading adoption of a system which has such great defects, and I hold that its universal adoption would be an immense disaster.

"Of course, I do not call in question the great advantages to be derived from the ability to carry the method of decimal calculation into quantities and values, and, of course, I do not call in question the desirableness of having some rationally originated unit from which all measures of lengths, weights, forces, etc., shall be derived. That, as promising to end the present chaos, the metric system has merits goes without saying. But I object to it on the ground that it is inconvenient for various purposes of daily life, and that the conveniences it achieves may be achieved without entailing any inconveniences.

"One single fact should suffice to give us pause. This fact is that, notwithstanding the existence of the decimal notation, men have in so many cases fallen into systems of division at variance with it, and especially duodecimal division. Numeration by tens and multiples of ten has prevailed among civilized races from early times. What, then, has made them desert this mode of numeration in their tables of weights, measures and values? They cannot have done this without a strong reason. The strong reason is conspicuous—the need for easy division into aliquot parts. For a long period they were hindered in regularizing their weights and measures by the circumstance that these had been derived from organic bodies and organic lengths—the carat and grain, for instance, or the cubit, foot and digit. Organic weights and lengths thus derived were not definite multiples one of another, and where they were approximate multiples the numbers of these were irregular—would not conform to any system. But there early began, as among the Chaldeans, arrangements for bringing these natural measures into commensurable relations. By sexagesimal division (60 being the first number divisible both by 10 and 12) the Babylonian cubit was brought into relation with the Babylonian foot. The stages of change from nation to nation and from age to age cannot, of course, be traced; but it suffices to recognize the fact that the tendency has been toward systems of easily divisible quantities—the avoirdupois pound of 16 ounces, for instance, which is divisible into halves, into quarters, into eighths. But above all, men have gravitated toward a 12-division because 12 is more divisible into aliquot parts than any other number—halves, quarters, thirds, sixths; and their reason for having in so many cases adopted the duodecimal division is that this divisibility has greatly facilitated their transactions. When counting by twelves instead of tens, they have been in far fewer cases troubled by fragmentary numbers. There has been an economy of time and mental effort. These practical advantages are of greater importance than the advantages of theoretical completeness. Thus, even were there no means of combining the benefits achieved by duodecimal division, it would still be a question whether the benefits of one with its evils were or were not to be preferred to the benefits of the other with its evils—a question to be carefully considered before making any change.

"But now the important fact, at present ignored, and to which I draw your attention, is that it is perfectly possible to have all the facilities which a method of notation like that of decimals gives, along with all the facilities which duodecimal division gives. It needs only to introduce two additional digits for 10 and 11 to unite the advantages of both systems. The methods of calculation which now go along with the decimal system of numeration would be equally available were 12 made the basis number instead of 10. In consequence of the association of ideas established in them in early days and perpetually repeated throughout life, nearly all people suppose that there is something natural in a method of calculation by tens and compoundings of tens. But I need hardly say that this current notion is utterly baseless. The

existing system had resulted from the fact that we have five fingers on each hand. If we had had six on each, there would never have been any trouble. No man would ever have dreamt of numbering by tens, and the advantages of duodecimal division with a mode of calculation like that of decimals would have come as a matter of course."

Summing up the disadvantages presented, the following points are stressed: Professedly aiming to introduce uniformity of method, the metric system cannot be brought into harmony with certain unalterable divisions of space nor with certain natural divisions of time, nor with the artificial divisions of time which all civilized men have adopted. As 10 is divisible only by 5 and 2 (of which the resulting fifth is useless), its divisibility is of the smallest; and having only a makeshift fourth and no exact third, it will not lend itself to that division into aliquot parts so needful for the purposes of daily life. From this indivisibility it has resulted that, though men from the beginning had in their ten fingers the decimal system ready made, they have, in proportion as civilization has progressed, adopted, for purposes of measurement and exchange, easily divisible groups of units, and in a recent case, where the 10-division of money has been imposed upon them, they have, under pressure of business needs, abandoned it for the system of division into halves, quarters, eighths, sixteenths. On the other hand, the number 12 is unique in its divisibility—yields two classes of aliquot parts, and for this reason has been in so many cases adopted for weights, measures and values. At the same time it harmonizes with those chief divisions of time which Nature has imposed upon us and with the artificial divisions of time by which men have supplemented them; while its sub-multiple, 4, harmonizes with certain unalterable divisions of space, and with those divisions into quarters which men use in so many cases. Meanwhile, if two new digits for 10 and 11 be used, there arises a system of calculation perfectly parallel to the system known as decimals, and yielding just the same facilities for computation—sometimes, indeed, greater facilities, for, as shown in the memorandum named in the above letter, it is even better for certain arithmetical processes.

A mathematician and astronomer, writing to Herbert Spencer at this time, said:

"It has always been an astonishing thing to me that the advocates of decimalization do not perceive that its only advantage is in computation. In every other process it is a detriment."

From one who every month had to act as auditor, Spencer received a letter in which it was said:

"I had to go over more than £20,000 of accounts yesterday, and was very thankful that it was not in francs."

"This statement, coming from a man of business, has suggested to me the question. By whose advice is it that the metric system of weights, measures and values is to be adopted? Is it by the advice of those who spend their lives in weighing and measuring and receiving payments for goods? Is it the men who alone are concerned in portioning out commodities of one or other kind to customers and who have every minute need for using this or that division or subdivision of weights and measures, have demanded to use the decimal system? Far from it. I venture to say that in no case has the retail trader been consulted. There lies before me an imposing list of the countries that have followed the lead of France. It is headed 'Progress of the Metric System.' It might fitly have been headed 'Progress of Bureaucratic Coercion.' When, 50 years after its nominal establishment in France, the metric system was made compulsory it was not because those who had to measure our commodities over the counter wished to use it, but because the Government commanded them to do so; and when it was adopted in Germany under the Bismarckian regime, we may be sure that the opinions of shopkeepers were not asked. Similarly elsewhere, its adoption has resulted from the official will and not from the popular will.

"Why has this happened? For an answer we must go back to the time of the French Revolution, when scientific men were entrusted with the task of forming a rational system of weights, measures and values for universal use. The idea was a great one, and, allowing for the fundamental defect on which I have been insisting, it was admirably carried out. As this defect does not diminish its great convenience for scientific purposes, the system has been gradually adopted by scientific men all over the world, the great advantage being that measurements registered by a scientific man of one nation are without any trouble made intelligible to men of other nations. Evidently moved by the desire

for human welfare at large, scientific men have been of late years urging that the metric system should be made universal, in the belief that immense advantages, like those which they themselves find, will be found by all who are engaged in trade. Here comes in the error. They have identified two quite different requirements. For what purpose does the man of science use the metric system? For processes of measurement. For what purpose is the trader to use it? For processes of measurement plus processes of exchange. This additional element alters the problem essentially. It matters not to a chemist whether the volumes he specifies in cubic centimeters or the weights he gives in grammes are or are not easily divisible with exactness. Whether the quantities of liquids or gases which the physicist states in liters can or cannot be readily divided into aliquot parts is indifferent. And to the morphologist or microscopist who writes down dimensions in subdivisions of the meter, the easy divisibility of the lengths he states is utterly irrelevant. But it is far otherwise with the man who all day long has to portion out commodities to customers and receive money in return. To satisfy the various wants of those multitudes whose purchases are in small quantities, he needs measures that fall into easy divisions and a coinage which facilitates calculation and the giving of change. Force him to do his business in tenths, and he will inevitably be impeded."

It is but a step from Herbert Spencer's opposition of 25 years ago to the compulsory establishment of the metric system in England to the attitude of a large number of leading educators in the technical schools of the United States today.

The following expressions from professors in three of the leading engineering and technical schools of the country are impressive because they show that the evils of the metric system to industry are clearly recognized by those who are best informed on the subject and therefore in the best position to appreciate its theoretical advantages:

Dr. Alex. C. Humphreys, president Stevens Institute of Technology, writes:

"I feel that college men who have had no experience outside of the college and laboratory perhaps do not appreciate the situation regarding matters of weight and measurement. It is the manufacturers who come up against the real tests. Having had wide experience as an engineer, manager of industrial plants and as a consulting engineer, I feel that I am competent to look upon the practical side, and my opinion is without qualification that a compulsory law in favor of the metric system will be a fatal mistake and would place upon the industrial interests of the United States a tremendously heavy and unnecessary burden which would at this time, in view of foreign competition, be particularly inexpedient. It would involve the expenditure of millions and millions of dollars, and, instead of helping us with regard to exports, it would be hurtful.

"To representatives of educational associations and institutions who may have been led into an endorsement of the metric program, I would say that while naturally appealing to the workers in the laboratory, as I am in a position to appreciate, I feel sure that to make a metric law compulsory would be a great misfortune to this country."

Thomas E. Butterfield, associate professor mechanical engineering Lehigh University, gives as his experience:

"My college enthusiasm for the metric system did not survive my employment as an engineer in Germany, the chief metric country. I found that the metric system was not in universal use there after a generation of compulsory legislation, and also found the use of the metric system of no advantage in engineering computation.

"Further careful study for years has convinced me that the fancied logical advantages of the metric system are illusory, and that the agitation in favor of its adoption is harmful to American industry and to engineering education."

L. P. Breckenridge, professor mechanical engineering Yale University, shows how the practical demands of industry work against any change, and says:

"There is, I believe, a mistaken feeling that college officials and professors can be expected to favor the metric system and urge its adoption in this country to the exclusion of our established system of weights and measures. Such a feeling may exist among those who have not had practical manufacturing experience, but on the part of professors of mechanical engineering and those who are familiar with the needs of our factories I believe there is a strong sentiment against a change. Further, I feel that it is distinctly

hurtful to instill into the minds of college students ideas favoring a change in our basic standards which later experience in practical work makes it necessary to revise.

"Colleges and universities should make every effort to co operate with manufacturers instead of promulgating radical ideas which will 'throw a monkey-wrench into the wheels of industry.'"

Why Westinghouse Does Not Use the Metric System.

[The following statement from the office of the Westinghouse Electric & Manufacturing Co. needs to be strongly emphasized at this time in view of the flood of literature poured out recently by propagandists seeking to force the general adoption of the metric system on the country. The subject is of great importance to every individual as well as to American industry.—Editor MANUFACTURERS RECORD.]

It is sometimes difficult to explain the obvious, all the more so when reasons for explanation appear unnecessary as well as approaching monotonous repetition.

This is doubly true of the case against the adoption of the metric system, whose use, pro and con, has been expounded in all sections of the United States since the early part of the nineteenth century. At first, suggestions were quietly put forth regarding its supposedly simple characteristics. During the past few years propaganda urging its general adoption has grown more aggressive until now the mails are filled with metric literature. Bills have even been introduced in Congress whose passage would have meant that the use of any system of weights and measures other than metric would have been illegal.

In spite of all this urging, there appears to be no general demand for the adoption of the metric system in this country. The manufacturing plants which are using it are few in number, and they are doing so under difficulties, while the great mass of people who are responsible alone for a system of weights and measures are scarcely aware of its existence. This cannot be attributed to ignorance, for it is taught in all public schools. There is no "gag," for the statutes of the country legalized its use many years ago. If it has so many desired characteristics, it would seem to the layman that the process of simplifying weights and measures was very slow.

One of the reasons most commonly urged for the adoption of metric units was that it would greatly aid foreign trade. That would appear to be inviting the mountain to go to Mahomet, for the greater number of manufacturing plants are located in English-speaking countries, where naturally the people use only the British system of weights and measures. Factories located in the United States, for instance, sell all but a small per centage of their goods in this country. It would appear, then, that to sell a few articles to metric countries a certain class would make 100,000,000 people climb out of their accustomed channels to learn a puzzling unfamiliar language. Nor is this necessary, for Westinghouse Electric & Manufacturing Co. does a great deal of business with countries using the metric system without difficulty or embarrassment.

From stories sent out it would seem that all foreign countries with the exception of Great Britain were metric. That this is not true is evident from the fact that even those which are out and out metric, like France, Belgian, Denmark, etc., are more familiar with the English system than we are with the metric. In Latin America some countries use a system of English extraction, but with Spanish terms. Some use metric and Spanish. Others use metric alone, but they are all familiar with the English.

No one doubts for a moment the tremendous difficulties that would be involved in making this country over into a metric-speaking and thinking people. These difficulties would multiply daily until nothing less than chaos would result. First, the greatest number of people in the country would have to learn the metric tables. Then they would have to translate metric terms into English before a ratio of values could be obtained. This in daily life, where thousands of small transactions are carried on, would be ludicrous. Imagine the mental calisthenics of a grocer should he suddenly be asked for .454 kilogram of butter, approximately one pound.

This is a period when production is needed throughout the country, there being shortage of manufactured materials. Is there any reason for urging the adoption of the metric system at this time, when it is certain that were it suddenly introduced in the factory, production undoubtedly would be held up and more than

likely would be stopped entirely until the workmen familiarized themselves with the new units? The very fact that English measurements can be halved and quartered without introducing complicating fractions makes it more advantageous in shop work than the metric measurements.

A case in which metric measurements complicate shop work has been recently acknowledged by an official of one of the largest tire companies in the world. His company recently adopted the metric system, and it is now partially used in all except the most recent factory, which is all metric. His words regarding the advantages of the system are interesting, particularly in regard to its use in the storekeeping and shipping departments. In the former, raw materials received in English units must be transferred into metric units by production clerks before going to the workmen. Upon completion, the metric article must again be converted into the English units in order to mark shipping weights. There are some departments of the company which are still using the English system. More translation. This condition, the writer says, will last until the United States adopts the metric system. Judging from past experience, there will be a long wait.

The Westinghouse company has no desire to install a metric translation department pending the adoption of the French system in America. It is a complex organization, highly detailed, and a delay in any point of production is felt in every department. Thousands of delicate, high-priced instruments are in daily use which the company has no desire to scrap for metric tools. There are also many tables computed in the English system which would have to be made over, and in addition have a table of equivalents, practically tripling the labor used in making up tables as well as doubling their size. This paves the way for errors.

Westinghouse, too, has little desire to install a school to teach its thousands of workmen the metric system. The work entailed in this one item alone would be enormous, even if it were certain that employees could pick up the system rapidly. Others have not found this the case.

These are, briefly, some of the reasons why the Westinghouse Electric & Manufacturing Co. is opposing the introduction of the metric system in America. Its advantages have yet to be proven in every way except theoretically, and its practicability in the United States is uncertain.

Inauguration of Richmond-New York Steamship Line.

Richmond, Va., August 20—[Special.]—Inauguration of the new ocean line of the Richmond-New York Steamship Co., operating direct between the two points, August 16, was signalized by the arrival at the Richmond municipal docks of the steamship Lake Frances. More than 10,000 Richmond people were at the pier to greet the first of the great ocean carriers to steam the James River. The boat made the trip under the most unfavorable river conditions with no loss of time on the river, and glided gracefully into her berth without aid of tug.

The Lake Frances, soon to be rechristened the City of Richmond, was built under the supervision of the United States Fleet

Corporation, and until the sale of the ship to Richmond business interests was operated by the United States Shipping Board. It is of steel construction, length 254 feet, breadth 42 feet 6 inches, depth 21 feet, and has a draft of 18.6. The Lake Frances is equipped with triple expansion engines, 2 Scotch boilers, burns 20 tons of coal in 24 hours and has a speed of 10 knots. Her general cargo space is for 2000 tons. The Richmond-New York Steamship Co. paid \$800,000 for the Lake Frances and a sister ship, the Lake Sterling.

On her maiden voyage to Richmond the Lake Frances brought 600 tons of mixed cargo and departed on the 20th for New York with 800 tons of freight in her holds. The Lake Sterling, to be named the City of Petersburg, is expected to leave New York on her first trip to Richmond, about the 24th. The schedule will call for semi-weekly sailings.

Virginia Orchardists Look for Better Marketing Conditions Due to New York to Richmond Steamship Line.

Richmond, Va., August 21—[Special.]—The Bureau of Markets in Virginia estimates that the total apple crop in the State this fall will approximate 1,608,000 barrels, of which Frederick county will produce 119,898 barrels, Albemarle 61,946, Patrick 45,444 and Rappahannock 37,700. In the reports submitted by 303 orchardists there are visible 191,655 Yorks, 83,243 winesaps, 47,981 pippins, 64,665 Bens, 13,790 twigs, 12,850 Staymans, other varieties scattering, such as Bonum, Jonathan, Baldwins and Ganos.

During the season 1919 countless thousands of barrels of Virginia apples were left to rot because of the inability of shippers to obtain cars to move the crop east, and also to the fact that repeated freight embargoes often left carloads of fruit to perish on sidings.

This season the growers are turning to the new ocean steamship line recently established by Richmond business men through the Chamber of Commerce, and it is believed the twice-a-week sailings direct from Richmond to New York will enable the orchardists to get their fruit on Northern and New England markets to much better advantage than the all-rail movement on which they have heretofore depended.

Large Deliveries by a Mexican Oil Company.

Tampico, Mexico, August 14—[Special.]—Deliveries of petroleum and its products by the Mexican Petroleum Co., through its subsidiary, the Huasteca Petroleum Co., for the month of July amounted to 3,139,094.07 barrels. This was the largest quantity of oil ever handled by one company in a single month in Mexico. In making the foreign and coastwise shipments the company used the ports of Tampico and Port Lobos. A recapitulation of these deliveries shows that 2,489,352.97 barrels were shipped from Tampico and 228,488.38 barrels from Port Lobos. Local and pipeline deliveries to customers were 367,185.90 barrels, while oil used in operation totaled 54,066.82 barrels.



STEAMSHIP LAKE FRANCES AT RICHMOND DOCKS AFTER VOYAGE FROM NEW YORK. THE FIRST GREAT OCEAN VESSEL TO MAKE THE TRIP UP THE JAMES RIVER.

Large Tracts of Cut-Over Timber Land in Mississippi Valley to Be Converted Into Small Farms

SCHEME OF DEVELOPMENT THAT SHOULD MEAN MUCH TO THE AGRICULTURAL INTERESTS OF ARKANSAS, LOUISIANA AND MISSISSIPPI.

By C. E. COLLINS, Field Secretary Southern Alluvial Land Association, Memphis, Tenn.

The cutting up of great tracts of cut-over timber land to convert them into small productive farms will be undertaken on a big scale in the immediate Lower Mississippi Valley this year and next. At least three of the big land-owning lumber concerns have announced that they will throw their lands upon the market. Combined holdings of only these three will run into the hundreds of thousands of acres.

The Chicago Mill & Lumber Co., one of the biggest hardwood companies in the lower valley and one of the greatest land owning corporations, has just established a land department which will assume charge of its real estate. The company owns not only thousands but hundreds of thousands of acres in tracts of many sizes in Arkansas, Louisiana and Mississippi. All of the land lies in the so-called "Delta" or alluvial soil region, fast gaining fame for its great productivity. It is the land of long-staple cotton and big yields of wheat, corn, oats, fruits, berries, melons and practically every other farm product of the temperate zone, with many of the tropics.

The company's land will be handled by C. W. L. Armour, former cotton planter of Phillips county, Arkansas, and for many years a real estate dealer in Arkansas. He will supervise continued operations on the farms that the company now is cultivating, as well as the marketing features. Offices of the land department will be at the general offices of the company in Memphis.

No definite policy as to the sale of small farms has been determined upon, save that the big area will be cut into small farms and sold to real farmers. No big tracts for "speculation" will be offered if possible to keep the speculators away. Just now the company is making plans to sell on small cash payments with liberal terms on the balance, the idea being to attract the "small" farmer who will operate his place in person, building it up by improvements and increased production.

Coincident with the announcement by the Chicago Mill & Lumber Co. is an announcement by the Tallahatchie Lumber Co., another hardwood concern with general offices in Memphis, of the establishment of a land department which will handle the marketing of lands in the Mississippi Delta. As a starter the company will cut up into 40, 80 and 160-acre farms two tracts totaling 15,000 acres in Tallahatchie county, Mississippi. Most of the small farms will contain 40 acres.

The new land department will start business September 1 under direction of M. E. Miller, who has been county farm agent in Tallahatchie county. He is not only a graduate agriculturist and soil expert, but an experienced land salesman. He will have headquarters in Memphis.

In announcing the marketing of the Mississippi acreage, Vice-President W. H. Dick said that tenants who now are farming some of the company's property in Mississippi will be given the first opportunity to buy. The company has made terms very reasonable to attract farmers with little capital. It will ask 10 per cent in cash, the remainder in nine equal payments through as many years.

"We want to get the land into the hands of farmers who will handle their places personally," said Mr. Dick. "There is enough 'absentee ownership' in the South already and it is not contributing as much to the development of the country as we want to see. We feel that a farm operated, managed and looked after by the owner will soon be of big value to the community in which it is located. That means development of the old farms as well as the idle tracts. And it means prosperity for the little fellow."

No land will be sold for speculation, and only the best land will be sold, this with an agreement to take it back at the purchase price if, for any reason, it is not satisfactory in every way to the purchaser. Two thousand of the 15,000 acres are in cultivation, and an effort will be made to lay out the small farms so that each tract, if possible, will contain a small acreage of land ready to work. The remainder is timbered land from which the large saw trees have been removed.

The establishment of forest products plants in Memphis and Charleston, Miss., makes the clearing of cut-over land much less costly than it formerly was, for these plants now are taking cord wood at \$5 per cord. Cut-over land will yield enough cord wood to cut the purchase price to a very low figure, for the wood can be taken off at a good profit, either by contract or by day labor.

Another of the big companies owning many acres and planning to market the property in small tracts is the Lamb-Fish Lumber Co. of Charleston, Miss. It previously has sold small farms, as has the Chicago Mill and Lumber Co., but more attention will be given the work in the future than has been given in the past.

The Lamb-Fish Company, credited with having the largest hardwood lumber mill in the world at Charleston, Miss., adopted a novel scheme in marketing the land it had already last season.

Every acre was cleared of everything save the stumps. Farms were cut out in 40, 80 and 160-acre tracts. On the smaller tracts the company erected five-room bungalows, well built and modern in so far as the average farm house is modern. If the owner desired, the company built several negro tenant's houses instead of the bungalow. On the larger tracts it built both. Without advertising and without agents, the company sold these small farms at an average price of \$125 an acre and could not meet the demands. The places went like hot cakes. The company owns upwards of 100,000 acres in the rich bottom lands or delta of the Mississippi and it plans, eventually, to cut all of it into small farms.

Division of big tracts of land in the lower Mississippi Valley is of tremendous importance to the development of the region. For many years the land has been owned in great bodies largely by lumbermen. Years ago it was of little value except for the timber. But levees have stopped overflows and drainage is making the land suitable for intensive cultivation. In the old days it was considered a fine joke when a man sold a dozen or more sections of the land for a few dollars an acre, to throw in an extra section on the unsuspecting purchaser. The old owners wanted to escape paying taxes. The same lands today are bringing from \$40 to \$300 an acre. The big tracts have been held intact, in many instances, by companies that could afford to let them remain in idleness, because values climbed steadily and the increase in price was a good excuse to hold on.

The result of such ownership has been slow development and minimum production. That portion of big tracts which was cultivated, and is cultivated just the same now, usually has been handled by renters, tenants or share-croppers. They have done little or nothing in the way of development and improvement, getting what they could with the least expense and outlay. No intensive schemes of cultivation for improving soil, etc., have been followed, as a rule.

This will be completely changed as the big tracts are cut into small farms for the new owner to handle personally. It will mean faster conversion of the idle land into producing land; it will mean better methods and improved methods; it will mean greater production and surer production. It will contribute as much to the growth of the great area of rich alluvial lands of the lower Mississippi Valley as any other one thing.

Tariff Necessary For American Peanut as Well as Other Industries.

J. E. PIMER, Secretary, The Suffolk Peanut Co., Suffolk, Va.—We have read with much interest the statement by Senator Harding in your issue of August 12. The writer fully endorses this article as it sets forth his personal view of the tariff question.

You will find enclosed our subscription to your paper for one year, and we hope that you will be able to start paper our way with your next issue.

The writer feels certain that the entire peanut industry greatly appreciates and values the support which you are giving the fight for a protective tariff, which is absolutely necessary if the industry is to be continued in America.

AN AGRICULTURAL EXCURSION TO THE SOUTHEAST.

An Instructive Trip Which Should Mean Millions to Arkansas in Improved Cotton Culture.

By C. A. WHITTLE, Southern Soil Improvement Committee.

One hundred and fifty planters, bankers and merchants of Arkansas, traveling in a special train of Pullman cars, visited three Southeastern States during the first 10 days of August to study agricultural methods, particularly the methods used in growing cotton. The records show that cotton yields have been increasing year by year in certain Southeastern States, whereas in Western States the yields have been steadily declining not only with cotton, but other crops.

The party of farmers and business men were welcomed with true Southern hospitality; in fact, given a royal welcome. As a result of their investigations, the farmers of Arkansas went back to their State to put into effect new methods of growing their cotton and perhaps other crops.

Some of the outstanding practices that impressed the Arkansas travelers favorably were the greater use of commercial fertilizers, the methods used in cultivating cotton, the use of legumes, especially of the velvet bean, the possibilities of making poor lands of Arkansas productive.

The first and most persistent impression of the Western farmers was the poor lands, the lack of natural fertility everywhere, as compared with the soils of Arkansas. Their astonishment was the greater, therefore, when they saw the splendid crops that were growing on lands which if they had been in Arkansas would have been considered too poor to till. J. N. Harper, director of the party, said that the reason the farms were yielding so much in the Southeast today is that they lost their fertility years ago, and the farmer has been forced to learn how to improve their productivity, whereas in newer States there is a tendency to keep on depending upon the soil's natural fertility. The farmer of the Southeast has learned how to feed his crops, and feed them profitably.

The first objective was Americus, Ga., a day being spent in making automobile tour of Sumter county. Next to the astonishment of seeing such magnificent crops growing on red, thin lands, was the fact that the cotton and corn fields were perfectly clean of weeds; that these crops were grown on the level rather than on beds, as in Arkansas, and that a shallow sweep is used for cultivation rather than deep running plows, making for lower cost of cultivation. The Westerners were face to face with the velvet bean in all of its glory, growing as a companion crop of corn. Every corn field had its velvet beans or cowpeas. They saw the peanut growing everywhere.

At Athens, Ga., the next stop, the auto trip carried the farmers into typical Piedmont regions, to a farm which last year made the greatest cotton yield in the country, where three bales of cotton to the acre were made, and for which a prize of \$1000 was awarded. Here the lesson of pedigreed seed and heavy fertilization was impressed. A college farm that pays handsomely was also an attraction at Athens.

The next stop was Greenville, S. C. The party wanted to visit a big cotton mill and learn what is necessary for the farmer to do to so handle his cotton as to please the mill and get a maximum price. The Woodside Mills was the host. The farmers were told why stained cotton could not command the best price. They were told that cotton that produced lint of varying lengths was not desirable and could not bring the best price.

Mr. Woodside gave courteous and satisfying answers to every question, and the farmers and business men went away with a better realization of how to serve the cotton mill and at the same time serve themselves. A visit to nearby farms brought out the methods of soil building employed wherein fertilizers and cover crops for green manuring were depended upon.

As the guests of Spartanburg, the visitors were given an opportunity to see bale-to-the-acre farms between Greenville and Spartanburg and to learn how it was done. Governor Cooper was with the party at Greenville, Spartanburg and Hartsville, S. C., speaking at each place.

From the Piedmont region the party entered the coastal plains, the first stop being at Florence, S. C. The wonderful crops grown

on the sandy soils of Florence and Darlington counties was a continuous revelation of the day. Fertilizers and good seed were the lessons. The Young seed farm, where three bales to the acre grew last year, was visited. The cotton growers said it looked like it would produce it again. At Hartsville the great Coker seed farm was visited, and the large staff of experts showed the visitors what the various strains of cotton were doing and how tests are made. At no place was there such overwhelming evidence in behalf of using pedigreed seed as was revealed here.

Bennettsville, the county-seat of the famous Marlboro county, was the next objective. Cotton in all its glory stretched away on every hand during a whole day's trip, cotton that promised to do as well as last year, when the entire county averaged nearly a bale to the acre. This county stood for maximum use of fertilizers, from 800 to 1500 pounds of fertilizer being used per acre. Marlboro county used 60,000 tons of fertilizer last year, which was more than the whole State of Arkansas had used.

The final stop for farm method study was at Wilson, N. C., the land of white sandy soil which 15 years ago could be bought for \$10 an acre, but which now sells at from \$300 to \$500.

The party of Arkansas farmers were honored in every State. Governor Dorsey of Georgia was with them at Americus and Athens. Americus tendered a banquet that was greatly enjoyed. Leslie and Plains, small towns visited during the day, gave feasts of watermelons and offered "smokes." The speech-making at the University of Georgia, in Athens, was a notable event, with Governor Dorsey, President Soule of the College of Agriculture, President Harry Hodgson of the Southern Fertilizer Association, Director Harper of the Soil Improvement Committee and the champion cotton grower, W. H. Collins, all speaking.

Greenville, S. C., tendered a banquet at which Governor Cooper was the principal speaker. Spartanburg tendered a supper and presented a program of speech-making that was one of the features of the whole trip; Dr. Snyder of Wofford College, Mr. Rett, chairman of the State Highway Commission and Governor Cooper being leading speakers.

Florence tendered a breakfast, Darlington a dinner and Hartsville a supper. Governor Cooper presided at the speaking. D. R. Coker, Bright Williamson, Fred Young and J. N. Harper spoke. Bennettsville, Adamsville and McColl, in Marlboro county, refreshed the Arkansas travelers. Wilson, N. C., afforded a fitting climax with barbecue and supper, with speeches from Governor Bickett and agricultural leaders, and with a loving cup from Wilson to Little Rock.

At all points the citizens of the towns gave the use of their automobiles and turned chauffeurs for the occasion.

H. M. Cottrell, agriculturist, and E. J. Bodban, chairman of the Little Rock Profitable Farming Bureau, under whose auspices the tour was made, were immensely pleased with the trip, and believe it will mean millions to Arkansas in improved cotton culture.

Charges for River Freight at Issue.

Birmingham, Ala., August 23—[Special.]—Conference was held here this week between officials of the Frisco Railroad and officials of the Mississippi-Warrior waterways transportation looking to some agreement on the matter of interchange of freight at the port of Cordova, on the Warrior River. The Government has placed a derrick at this place and has taken over the coal chute and tracks that were built by the De Bardeleben Coal Co. The railroad has been doing the switching at the port, but now claims that there should be some payment for this switching, inasmuch as the Government with the river transportation assumes the position of common carrier. The officials of the river plans express opinion that a bad precedent is being set and that the railroad should not make additional charges, which might have a detrimental effect on the whole plans of the river transportation. There will be further threshing out of the subject. Before long the river equipment, steel towboats and self propelled barges, will be coming on and the service on the warrior will be greatly improved. A consignment of ore from Brazil is being divided between the river and rail from Mobile, to which point the product was recently brought. Other upstream freight is being worked up, and belief is held that it will not be so long before there will be a more profitable movement from Mobile to this district. Coal movements down the river are steadily improving.

An Adequate Supply of Pulp-Wood for the United States Claimed for Our Pacific Coast

INTERVIEW WITH ONE OF OREGON'S LEADING LUMBERMEN.

"The shortage of paper that now affrights the publishing world is largely the result of that universal mania of those in a commanding financial position to squeeze the last possible dollar out of the consumer." This was the challenge hurled at the paper producers the other day by John H. Haak of Portland, Ore., during a visit to Baltimore. Mr. Haak has been in the lumber business all his life, and is one of the leading timber dealers in the State of Oregon.

He said: "The banker, more than anyone else, is at the bottom of the so-called shortage, just as he is at the bottom of a great deal of other profiteering today. These great paper enterprises, that require millions of dollars for their development, have been necessarily compelled to seek financial assistance from the money market, which means that they must go to a big banker and put the case into his hands to negotiate a loan. The banker, as a result of these negotiations, has a nice fat bunch of securities to offer, and as it pays better to divide with his friends in order that they, in turn, may divide their choice morsels with him, or, as the bankers say, 'divide the risk,' a syndicate of bankers is formed to do the underwriting. The bonds are sold to their respective clients, and, of course, in a measure the bankers stand as sponsors for the securities. They would soon disintegrate the group of clients on whom they feed if they didn't. While the banker never feels called upon to reimburse the bond buyer for a security that declined in value, despite his claims that it was gilt edge, he will however, do what he can to work off declining securities on occasional customers for the benefit of his steady customers, and at all times he tries to keep up the reputation of his promotions of bond issues. This last is perfectly correct, but the evil of the system, and the way in which it affects the paper industry, lies in this intricate and widespread interlocking of interests among the banking-houses engaged in underwriting such securities. The tendency is toward consolidation for control. Banking-houses, as everyone knows, specialize, and so there develops a group experienced in lumber and paper, just as there are groups specializing in textiles, in steels, in non-metallic building materials, in terminals and wharves and the like. The next step is to divide the risk among those who know how to estimate the risk, that is, the securities of one kind of industry become distributed through the chain of banking-houses devoted to that class of issues. They all stand as a unit to protect the group of big industries that they control, and the moment a new adventurer enters the field and seeks aid in financing himself he is advised to go to 'Smith, Jones & Company,' specialists. In other words, he at once finds himself in the ring, is cordially received, his plans are studied, and the whole group of rivals is instantly ready for him—not ready to help him, but, in street parlance, 'to get his goat.'"

Mr. Haak assures us that the foregoing explanation of allied interests in the paper business is the one chief reason why there is a shortage today. "It is possible to make a showing of many other difficulties, which seem plausible enough," he said, "but when the facts are all in and examined the truth appears that every recent independent effort to develop paper plants on the Pacific Coast has been throttled by the bankers, who foresaw an advantage to themselves in encouraging the very difficulties that they offer in excuse for high prices, because these difficulties would enormously enhance the value of the plants in which they and their clients were interested, and, as fresh expansion became imperative, it could be accomplished through the same interests, either directly or camouflaged, so that these bankers would still be in control and free from the danger of having new and untried rivals take the bit in their teeth. One by one, however, the greatest paper consumers are breaking away from the grinding monopoly that is robbing them, and are entering into paper manufacturing for themselves. The New York World, the New York Times and the Curtis Publishing Co. have done this, and some others have had to adopt this means for self-protection. If a few newspaper syndicates were to be formed, and each would develop a plant for itself out in Oregon, Washington, Montana or California, they would have cheap paper, and incidentally would

bring the prices down in the open market for the benefit of the whole country. The present high price is not without effect on the political life and political security of the nation. It makes newspapers dear, it keeps much legitimate news from being printed, and it enormously raises the price of books whose educational value exceeds that of the newspapers. These conditions, in combination with Claude Kitchen's zone law for newspaper postal rates, tends to keep the people of America from getting the intellectual food that is of the utmost value for the country, both politically and socially."

Mr. Haak affirms that unless the grip of the combination of banking interests upon the woodpulp industry is broken by making it possible to finance new enterprises outside of the charmed circle, the price of newsprint paper will go to 30 cents per pound, and that will extinguish many hundreds of small newspapers from the Atlantic to the Pacific. "From the standpoint of the American people the local papers are worth as much for the normal development of true Americanism as the big metropolitan publications, for they are not so tied to the point of view of the men who reflect what is called the 'Wall Street idea.' This paper question is intimately related to our national development, and at a time of social unrest, such as we are now facing, it is unfortunate to permit the people's daily papers to be either curtailed or made in any manner subservient to a monopoly whose anchor is out on the little street that leads down from Trinity Church."

"The total timber standing in the United States today, outside of Alaska, is estimated at 2,800,000,000,000 feet, board measure. Nearly half of this is on the Pacific Coast, the approximate figures being:

	Billions of feet, B. M.
Oregon	550
Washington	375
California	350
Idaho	75
	1,350

"Of this amount about 120,000,000,000 consist of timber adapted for making the best and strongest newsprint paper that can be produced. Alaska adds another 64,000,000,000 feet of similar material."

"These are ideal districts for the manufacture of paper. The timber resources all lie close to the sea, mostly accessible by inlets and bays, permitting of manufacture alongside wharves within sight of the forests, with deep water admitting steamers that can be loaded at the mill for conveyance of the cargo via the Panama Canal at lower rates of freight than are possible from the Canadian mills to Atlantic ports. The pulpwood forests of Oregon and Washington constitute a strip from 20 miles to 50 miles wide, and at one or two places even 100 miles wide, along the Pacific Coast. They fill the valleys and cover the slopes of the Coast Range, making it peculiarly easy to bring the logs, by a combination of cable, rail and river to manufacturing plants at tidewater. Furthermore, these streams, fed by the snows of the high Cascade range, maintain a remarkably uniform flow throughout the year, and it is possible by a reasonable expenditure to develop hydroelectric plants sufficient to operate mills that would supply half the total present consumption of newsprint paper."

"It must be explained that the Western hemlock is a tree not to be confused with the Eastern hemlock. The Western hemlock is a soft wood, not splintery, and one that makes a fibrous pulp that is perfectly disintegrated. At the present time the lumbermen cutting spruce and hemlock timber for sawing, cull out only the good logs and leave the small stuff, which is admirably adapted for pulp, to rot in the forest. The spruce and hemlock extend over the same area, so that the two species are available together. The chief variety in Oregon is the Sitka spruce, and very similar too is, so far as finished product is concerned, the White and Grand fir, the Amabilis, Noble and Shasta firs, the total stand being about 10,000,000,000 feet."

"The region in which these flourish is moist and warm. The mean annual temperature is 51 degrees Fahr., while the winter

seldom becomes so cold as to check growth for more than a few weeks, which means that the temperature rarely falls below 39 degrees Fahr. The effect of these climatic conditions on the regrowth of the timber is extraordinary. Estimates based on observation by Government specialists show a rate of growth for the forests as a whole of about 3 per cent per annum on the basis of 50,000 feet board measure per acre. The Government estimates that the young timber growth on the coast is about 1500 feet of timber board measure per annum per acre, which will produce about 1½ tons of newsprint paper per acre per annum.

"This is a matter of vital importance, and worthy of consideration as the basis for a national conservation policy, not for withdrawal from cutting, but for intelligent regulation before the timber areas are further depleted. By applying rational methods, taking as an example the system so admirably exemplified on a large scale in the Biltmore Forest in North Carolina, the Pacific Coast forests could be progressively harvested in rotation so that a cycle of cutting would extend over a period of about 30 years. Recent reports on tests conducted under Government supervision reduce the period to 22 years, but it is quite enough to accept the more conservative figure to show that in this region we have a perpetual supply available, and it can be demonstrated that, at present prices, taking into consideration all the factors entering into the problem, it is possible to ensure steady delivery of paper to Atlantic ports at a cost of \$65 per ton, or 3¼ cents per pound. This does not cover profit, but I believe the newspaper publishers would be quite willing to let the manufacturer have a profit of 50 per cent over all costs if he could still buy his paper at 5 cents per pound.

"The consumption of paper in the United States in 1918 (the 1919 figures are not yet to be had) amounted to the equivalent of 5,500,000 cords of wood used in its manufacture. The regrowth alone in the Oregon and Washington pulpwood forests is equivalent to 11,700,000 cords per year. And still the public listens credulously to the talk of the paper-makers about the exhaustion of the American pulpwood forests!

"At the present time a paper-mill plant of 600 tons daily capacity for making newsprint paper will cost about \$33,000 per ton of daily output; that is, \$19,800,000 for a 600-ton plant. Smaller installations would cost proportionately more, and vice versa. Partly because of the decrease in cost of power generation by large units, and partly because of the advantage of larger units in manufacturing, the cost of larger plants would be materially less. A 100-ton plant would cost now about \$35,000 per day-ton capacity, or \$3,500,000, which includes everything, even to the hydro-electric power development. The cost of making paper on that basis of cost would be between \$55 and \$60 per ton f. o. b. boat or cars at factory site. Larger plants could produce at \$50 per ton. Previous to the war these would have cost \$22,000 per day-ton capacity for a 350 to 400 ton plant. It would be possible to install plants of this kind within 18 to 24 months. Much would depend on the capability and activity of the purchasing agent.

"There is no difficulty in securing water-power, especially under the new law, and the Government estimates place the hydro-electric energy within 100 miles of Portland, Ore., alone at 5,500,000 horse-power. The maximum cost of water-power development in Oregon today would be \$250 per horse-power. In addition to this source of energy, there are large areas of coal closely associated with the timber districts of Oregon and Washington, a large part of the timber area of Oregon being underlain by coal deposits. Converting this into producer gas and using large units, the present cost of installations for the development of power from these coal fields would not exceed \$135 per horse-power.

"There is also an almost inexhaustible supply of sawmill waste, such as sawdust and hogged fuel for steam-power use.

"The solution of the paper problem is to be found in the proper utilization of the forests of the Pacific Coast.

"This involves an awakening of the consumers to the fact that they can ensure the maintenance of permanent resources, adequate for the needs of the country, within their own borders, if handled intelligently, and it involves, also, a degree of co-operation to make possible the financing of plants on a rational basis, freed from the obstructions that the closely knit group of Eastern bankers put in the way of competitive establishments.

"If the consumers of paper will organize groups for a constructive and conservative utilization of the Pacific Coast re-

sources, they can emancipate themselves from the tyrannous combination of financiers that is now bleeding them to the limit. They are in a superior position to do this effectively, because they control the great force of publicity, by means of which they can dominate the situation and secure proper legislation to supplement their efforts at independent paper production by the enactment of laws that will put into force the necessary control for taking full advantage of all the natural and favorable interrelated conditions of an inexhaustible supply of pulp timber, water-power and fuel, to which is added the advantage of rail and ocean transportation at exceptionally low costs, that bring the Pacific Coast as close to New York, Baltimore and other Atlantic ports as the lumber districts of Canada on the basis of price competition."

Important Report on North Carolina State Taxes— Completing Drainage Work in Hyde County— Other Activities.

Raleigh, N. C., August 19—[Special.]—The Joint Finance Committee of the Legislature, now in special session here, has made its report on taxes, and it is the most important ever submitted. Speaking for the committee, Chairman Rufus A. Doughton said the bill provided that there should be State tax levied upon property, adding that it is expected that the State will never again levy a property tax for its own uses. This most important announcement follows the new revaluation of property on a basis of real values, and the reduction of the constitutional limit of taxation from 66½ cents on the \$100 to 15 cents.

This honest revaluation and the wonderful progress the State is making have certainly put it on the map. Commissioner of Agriculture William A. Graham says he believes North Carolina will this year take second place among all the States in the matter of values of products per acre and per capita. He thinks Kansas may lead, by reason of its immense wheat crop. North Carolina now has the honor of holding fourth place.

The water is now nearly all out of Lake Mattamuskeet, in Hyde county, and the big pumps are handling it well. The drained territory, named New Holland, and containing some 75,000 acres, of which 49,000 was the lake bed, will in January be reached by the first railway in Hyde. Hundreds of men and much machinery are at work on this railway, 44 miles long, from Wenona, on the Norfolk Southern Railway, direct to the town of New Holland, on what used to be the shore of the lake. Wenona is in Washington county. The railway goes near Pungo Lake and in a few miles of Lake Phelps. These are two of the most remarkable of the rather numerous lakes in Eastern North Carolina. The railway will cross no streams of any size, and will develop one of the richest sections of the South. The contracting company which is building it agrees to complete the work the first of January next. If it fails to do so it forfeits \$20,000; if it carries out its agreement it gets a bonus of \$20,000. As may be easily imagined, the Norfolk Southern is very friendly to the new railway. The Norfolk Southern is playing a great part in the development of Eastern North Carolina.

One of the finest roads in the State, hard surface, is now under construction between Durham and Chapel Hill, the seat of the State University, a distance of 12 miles, the United States bearing half the expense. The road is to be made an object-lesson, and property along it is to be developed for real homes.

The members of the North Carolina Legislature were taken this week to the new State prison farm, four miles from the Capitol, in trucks of the State Highway Commission, and were shown the 8½-mile hard-surface highway which the United States Government and the State have jointly built between Raleigh and Cary, a link of the Central Highway. The legislators also viewed the prison farm, 2900 acres. This land, bought last October, was taken in January, and wonderful results have since been accomplished. Cotton, corn, peanuts, soy beans, velvet beans, sorghum and other crops are in fine growth.

At Burlington a \$1,000,000 spinning mill is under construction for the Durham Hosiery Co. The latter corporation has the distinction of being the largest manufacturer of hosiery in the United States, and has plants not only at Durham, but at various points in the State.

Burlington is also largely extending its sewer and water facilities.

A syndicate is being formed to build another ice plant at Newbern.

Production of Pig-Iron in the United States in the First Half of 1920*

HALF-YEARLY OUTPUT OF PIG-IRON BY STATES.

Production—Gross tons. (Includes spiegeleisen, ferro-manganese, ferro-silicon, ferro-phosphorus, etc.)

States	First half of 1919.	Second half of 1919.	First half of 1920.
Maine			
Massachusetts	4,914	8,764	6,180
Connecticut			
New York			
New Jersey	1,140,040	930,248	1,207,475
Pennsylvania	6,010,549	6,266,036	7,241,726
Maryland	129,548	114,454	254,421
Virginia	193,111	126,298	223,522
Alabama	990,122	1,139,970	1,225,236
Georgia			
Texas			
West Virginia	211,058	202,033	374,906
Kentucky			
Mississippi			
Tennessee	109,919	80,595	159,041
Ohio	3,952,117	3,150,510	4,139,811
Illinois	1,435,249	1,122,964	1,634,164
Indiana			
Michigan	1,514,697	1,200,962	1,426,045
Wisconsin			
Minnesota	352,169	273,510	345,091
Missouri			
Iowa			
Montana			
Colorado	254,742	129,845	206,985
Oregon			
Washington			
California			
Total	16,278,175	14,737,189	18,435,602

HALF-YEARLY PRODUCTION OF CHARCOAL PIG-IRON.

Massachusetts			
Connecticut	4,512	3,309	2,610
New York			
Pennsylvania			
Maryland			
Alabama			
Georgia	10,396	10,781	15,662
Tennessee			
Mississippi			
Michigan	114,579	112,294	92,382
Wisconsin			
Missouri	44,878	26,348	44,958
Total	174,365	152,732	155,612

TOTAL PRODUCTION OF PIG IRON ACCORDING TO FUEL USED.

Coke*	16,036,218	14,513,712	18,133,611
Anthracite†	67,592	79,745	146,379
Charcoal	174,365	152,732	155,612
Total	16,278,175	14,737,189	18,435,602

*Includes ferro-alloys made with electricity, electricity and coke, etc.
†Includes mixed anthracite and coke pig-iron.

HALF-YEARLY PRODUCTION OF BASIC PIG-IRON.

States	First half of 1919.	Second half of 1919.	First half of 1920.
New York, New Jersey	429,630	306,635	513,327
Pennsylvania—Allegheny County	1,679,913	1,600,701	1,646,540
Other counties	1,774,224	1,573,274	2,180,907
West Virginia, Alabama, Kentucky	514,872	552,226	691,574
Ohio	1,506,219	1,036,759	1,442,867
Indiana, Illinois	1,691,566	1,377,628	1,754,977
Michigan, Minnesota, Missouri, Colorado, Washington	315,711	136,622	221,402
Total	7,910,295	6,583,836	8,450,094

HALF-YEARLY PRODUCTION OF BESSEMER AND LOW-PHOSPHORUS PIG-IRON.

New York, New Jersey	210,510	123,930	193,096
Pennsylvania	1,959,459	2,342,712	2,523,457
Maryland	127,328	113,625	247,970
West Virginia, Kentucky, Tennessee, Alabama	181,839	62,828	193,426
Ohio	1,845,941	1,521,295	1,899,250
Illinois, Wisconsin, Colorado	856,544	629,823	862,225
Total	5,181,621	4,794,313	5,918,524

HALF-YEARLY PRODUCTION OF FOUNDRY PIG-IRON AND FERRO-SILICON.

Maine, Massachusetts, Conn.	4,871	8,735 *	6,173
New York, New Jersey	419,378	412,146	398,765
Pennsylvania	385,807	465,075	539,707
Maryland, Virginia, W. Va.	192,678	150,294	236,597
Kentucky	25,240	45,900	42,601
Tennessee, Texas	90,757	78,007	136,682
Alabama	461,306	622,083	644,494
Indiana	388,498	360,498	488,448
Illinois	67,772	49,350	107,572
Michigan	183,697	145,927	170,099
Wisconsin	123,903	126,455	171,416
Minnesota, Missouri, Iowa, Colorado, Oregon, Washington	91,976	25,265	37,637
Total	2,436,023	2,480,735	2,980,291

HALF-YEARLY PRODUCTION OF MALLEABLE PIG-IRON.

New York	70,421	77,184	90,320
Pennsylvania	45,744	61,189	68,880
Kentucky, Ohio	165,732	168,870	245,221
Indiana, Illinois, Michigan, Wisconsin, Minnesota, Missouri	183,926	215,983	261,744
Total	465,823	543,226	666,165

HALF-YEARLY PRODUCTION OF FORGE PIG-IRON.

New Jersey	2,514	6,417	2,968
Pennsylvania	53,173	93,750	101,852
Virginia, Tennessee	105		2,369
Alabama	7,273	9,797	9,441
Ohio	41,809	56,448	52,244
Total	104,874	166,412	168,869

HALF-YEARLY PRODUCTION OF SPIEGELEISEN AND FERRO-MANGANESE.

New York, Pennsylvania	110,377	99,777	179,706
Virginia, Alabama, Tennessee	17,597	12,695	4,387
Illinois, Colorado, Montana, Washington, California	16,308	12,939	11,968
Total	144,192	125,411	*186,961

*128,054 tons ferro-manganese and 58,907 tons spiegeleisen.

HALF-YEARLY PRODUCTION OF OTHER GRADES.

Connecticut, New York, New Jersey	4,743	3,965	7,984
Pennsylvania	5,579	9,558	11,691
Maryland, Virginia, West Virginia, Tennessee, Alabama	14,853	15,895	21,587
Ohio	4,778	6,549	9,771
Indiana, Illinois, Michigan, Wisconsin, Missouri, Iowa, Colorado, California	5,394	7,289	13,245
Total	35,347	43,256	64,188

PIG-IRON MADE FOR SALE OR FOR USE OF MAKERS IN THE FIRST HALF OF 1920.

Grades.	For sale, gross tons.	For maker's use.	Total gross tons.
Basic	1,083,340	7,367,354	8,450,694
Bessemer and low-phosphorus	539,273	5,388,251	5,918,524
Foundry, including ferro-silicon	2,901,907	78,234	2,980,201
Malleable	639,149	7,016	666,165
Forge or mill	75,986	92,883	168,869
Ferro-manganese	48,866	79,188	128,054
Spiegeleisen	41,887	17,029	58,907
All other grades	35,019	29,169	64,188
Total	5,376,487	13,069,115	18,435,602

*Compiled by American Iron & Steel Institute.

Much Interest Manifested in Shallow Oil Sands.

Claremore, Okla., August 21.—[Special.]—Not since the early days of the Nowata pool has there been such an interest in shallow oil territory as during the last few weeks. All of Rogers county that seems likely to produce oil has become active, and within three or four weeks negotiations have been lively. The indications are that small new companies seeking production quickly as a promotion basis will take a great deal of this possible oil-producing territory.

Nowata county also is attracting more investors. Some deeper and more prolific sands are being found in that field. Washington, Craig and Mayes counties are included in the territory under investigation. A few operators who have been devoting time to deeper pools are arranging to drill out Washington county shallow-sand areas.

It is a part of the history of these shallow sands that they have been the basis of more unsuccessful promotions than probably any other areas outside deep-sand pools. A few years ago it required but a few hundred dollars to drill into a sand good initially for 5 to 20 barrels a day. "We have production" was the big stock-selling slogan of the early promoters. On that basis some of them doubled or more than doubled their capital stock or went into other States and floated issues far beyond the possibilities of the field. Many companies failed eventually and production declined and thousands of stockholders lost all they invested.

Blue-sky laws of Oklahoma and other States are expected to forestall a repetition of those adventures. It appears that honest investors are coming here. The high price of oil, the supposed gradual decrease of the supply and the necessity for saving and operating shallow sands all over the mid-Continent district seem to cut a figure in these enterprises. Whatever may be the several purposes, this section of the State probably will see unprecedented activity during the next few months.

Lake Superior's Decreasing Iron Ore Reserves vs. Abundant Stores of the South

By Y. A. DYER, Birmingham, Ala.

To one who has followed the trend of iron and steel manufacture in the United States—and has paused to ponder over the enormous iron-ore tonnages which it has been necessary to extract to make possible present and past iron production—the recent article by Mr. Edward Davis on "The Future of the Lake Superior District as an Iron Ore Producer" bears a most significant message, especially so when borne in mind that such facts as are discussed are contained in Bulletin No. 7 of the University of Minnesota's School of Mines.

Since the year 1854, opening date of the Marquette range, and including the present season, these famous ore deposits will have rolled up the enormous tonnage figures of approximately 991,500,000 tons of high-grade ore, from which approximately 500,000,000 tons of Bessemer, basic and foundry irons will have been produced. At the close of the present year, and including the period from 1829, the entire iron production figures will show approximately 735,000,000 tons for the United States. These figures reveal the fact that the Lake district has supplied an average of 69 per cent of all ore for pig iron production during the 91 years which have elapsed, and about an average of 70 per cent since the year 1854. During some years it has supplied as much as 80 per cent of all the ore.

There is little wonder, then, that Mr. Davis says: "It is, of course, recognized by everyone that at some future date all of the merchantable ore will have been removed from the district. This date is placed by various estimators from 15 to 30 years hence." He also makes the significant statement: "The distribution of the Lake Superior ores among the various furnace companies shows that while some companies have a sufficient supply of ore to last them 30 or 40 years, others have enough to last only five or six years. These companies are already looking about for new sources of ore supply, and if they are not to be found in the Lake Superior district the companies will go elsewhere * * *"

The above statement of facts refer to what has come to be about an average ore of 51.50 per cent metallic iron, natural basis. In 1902 the average iron content was about 56 per cent metallic iron, natural basis. Therefore, it will be seen that during a period of 18 years the iron content has dropped an average of 4.50 iron units, with a consequent increase of siliceous matter; and, according to Mr. Davis, statement, the "peak" of production of high-grade ore has been reached, when he says: "As to whether or not it will be necessary to utilize the low-grade ore of the Lake Superior district, it appears that it will not only be necessary to utilize these ores in order to maintain the production of the district, but it will be necessary to begin in the very near future."

In speaking of the policy of some interests to hold low-grade ores as a reserve, Mr. Davis says: "It would eventually bring this material into such strong competition with ore from other districts that the Lake Superior low-grade ore deposits would probably never be utilized to any great extent."

Mr. Davis gives a general classification of what he terms non-merchantable ore on the following iron content basis:

1. Ores containing less than 40 per cent iron, natural basis.
2. Ores containing between 40 and 50 per cent, natural basis.
3. Ores containing over 50 per cent, natural basis.

He says: "In the first classification will be found the largest portion of low-grade ore material in the Lake Superior district. A much smaller amount will be found in second classification, and comparatively a very small amount of ore may be classed under the third division."

While most of us recall the Tornebohm estimate of 1905, crediting the United States with workable deposits of only 1,100,000,000 tons, allotting 1,000,000,000 tons to Lake Superior district, 60,000,000 to Alabama district and 40,000,000 tons widely distributed throughout the United States, as being a "huge joke," yet the serious figures of Mr. Davis reflect true facts as to the status of what once, and not long since, was considered an almost inexhaustible deposit of high-grade ore. The figures set forth by Mr. Davis accentuate the fact that instead of the iron and steel industry of the future attempting to "tie their hopes to the star of 55

and 60 per cent iron" on anything like a real competitive figure, they will fare far better by becoming reconciled to the fact that the "35 to 45 per cent variety" of home production ore is going to stand the "acid test." While there are many millions of tons of this low-grade ore in the Lake Superior district, Mr. Davis is earnest in his suggestion that the wise plan to pursue is that of concentrating methods, and that the time of application is at hand. In discussing the two factors suggested for making low-grade ores merchantable Mr. Davis says: "It must be remembered, however, that these conditions would bring several other iron-mining districts into strong competition with the Lake Superior region. * * *"

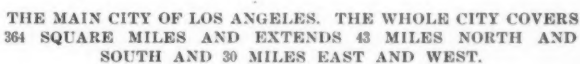
Of course, no well-informed engineer would suggest that Southern ores (with the possible exception of Texas brown ores) are likely to create a competitive market at the Eastern and Middle Western furnace centers, yet, to be informed, one has only to reflect to the Southern ore deposits, particularly the Birmingham and Attalla-Anniston-Talladega districts, for evidence of the existence of 2,000,000,000 tons of 37 per cent self-fluxing red ore (equal to 45 per cent to 47 per cent present Lake ores), 75,000,000 to 100,000,000 tons of 42 to 45 per cent (furnace yield) brown hematite ore and 100,000,000 to 200,000,000 tons of 40 to 45 per cent gray and so-called specular hematite ores of Talladega and Shelby counties, Alabama. However, the aspect does take on quite an "air of competition" when it is also borne in mind that Alabama is credited with a reserve of at least 35,000,000,000 tons of coal within the 25-mile and 50-mile zone hauls which carry minimum furnace raw material freight rates of 50 and 60 cents per ton, respectively, on coal, coke and ore. Coupled with this favorable condition is the fact that there is not yet the remotest time in sight when it will become necessary to draw on secondary or non-merchantable deposits. At the present rate of coal consumption, 20,000,000 tons per annum, there is in sight here a supply for 3250 years. With present extraction rate of approximately 7,000,000,000 tons per annum of ore in these districts, there is an assured supply for 290 years of the high-grade self-fluxing ore alone.

In the light of the facts as presented by Mr. Davis, it would seem that furnace and steel-plant expansion in the East and Middle West is, of necessity, at its "peak," and in order to maintain present rate of production and future supply in those centers the low or secondary grades of Lake ores must be concentrated and used to supplement the high-grade reserves. A view of the Southern situation reveals the fact that, from the standpoint of raw materials, it is capable of a most elastic expansion. As a matter of fact, this expansion is taking place periodically just as fast as market conditions are made available. Within the past four years foundry iron consumption in the South and Southwest has increased at least 10 per cent, and within the past year there has come to the Birmingham district foundry iron consumers of diversified manufacture, the equivalent of approximately 50,000 tons per annum. There have been created market conditions necessitating the manufacture of structural, boat and car steel in the South, and they have been promptly met by the United States Steel Corporation at its Ensley plants. Soil-pipe manufacture in the Birmingham and Anniston districts has doubled in plant number and iron and coke consumption within the past two years. By-product coke plants have practically replaced the old beehive oven, thereby cutting furnace coke costs at least 60 per cent. Modern and up-to-date mining machinery and methods have replaced antiquated and expensive methods, and blast-furnace methods have shifted from the old rule-of-thumb to highly technical and efficient management.

There is one factor, and only one, which will retard the Birmingham district's strides as a potent "competitor" in the field of iron, steel, coal and coke manufacture—that of territorial expansion. The history of Southern, Southwestern and Far Western development are too well known to be discounted, not to mention the great possibilities of the countries to the south of the Birmingham district.

COMBINATION OF AMAZING NERVE AND PUSH, WITH UTILIZATION OF ALL OPPORTUNITIES AS PRESENTED, BUILD UP MOST POPULOUS CENTER ON PACIFIC COAST, CHANGE AN INLAND CITY TO A SEAPORT AND LAY FOUNDATION FOR GREAT COTTON TRADE AND MANY INDUSTRIES—AN EXAMPLE FOR OTHER COMMUNITIES TO STUDY AND FOLLOW.

Still one great battle remained to be fought. Los Angeles was



a comparatively new port, and did not possess the great long-established steamship lines to the Orient or to the Panama Canal and the Atlantic that its northern rivals, San Francisco and Seattle, had long held. Moreover, the transcontinental railroads had long given identical freight rates to all Pacific Coast ports, regardless of the length of the haul. Thus Arizona cotton went to Los Angeles, to San Francisco and to Seattle at precisely the same rate, though the haul to Seattle was (according to route) either 900 or 1200 miles longer than to Los Angeles. Shippers of cotton and of other Southern California products had grown accustomed to shipping to San Francisco and Seattle, where they knew they would find steamship facilities, and hesitated to shift to Los Angeles, to which the rail freight cost was just as great. Consequently, Los Angeles was deriving little benefit from her close proximity to the areas where cotton and other products originated. This matter has, however, just been adjusted (July 28, 1920) by the granting to Los Angeles by the Interstate Commerce Commission of a reduction of 15 cents per hundred pounds (about 16½ per cent) in the rate from Phoenix, Ariz., and other cotton points.

The connection between the harbor and the aqueduct and how the two unite to give Los Angeles the primacy it claims among Pacific Coast ports calls for some further elaboration.

The municipality of Los Angeles built its harbor "to order," and took care to reserve to itself practically all the waterfront. Besides the big cotton and other docks in the outer harbor (45 feet deep), to which steamships drawing 35 feet of water may go without pilotage, it has built an inner harbor (30 feet deep) and eight miles of docks which can be expanded to 30 miles as need arises. This land and these docks, or docking privileges, the city is leasing to such important industries as may desire to establish themselves there. A railway system connecting with the great transcontinental lines runs at the "back doors" of all such factories, and the inner docks, to which ships drawing 30 feet can come, lie at the "front doors." Raw materials may be loaded from the cars into the back of the factory and finished products passed out at the front into steamships.

The power from the aqueduct runs all machinery and does away with all need of fuel. At present 70,000 horse-power is available or in use, and 14,000 more will be available by next January, making a total of 84,000 horse-power, which is about one-third of the potential of the aqueduct. The other two-thirds will be added, as required, during the next two years, only the building of the power-houses and the installation of the machinery remaining to be done. This power is sold at graduated rates that range from 1.56 cents per kilowatt hour to industrial consumers that use as little as 6000 kilowatt hours per month down to .76 cent to those who use 1,500,000 hours per month.

The combination of harbor facilities and cheap abundant power is probably unequalled in the United States. The whole of the great municipal plant, harbor and aqueduct, has cost the city about \$60,000,000, but it was well worth the money.

The above, of course, applies particularly to concerns that locate permanently at the harbor, but even better facilities for handling are at the service of shippers from distant points. Recent figures show that every year 300,000,000 tons of freight are handled twice at the different marine terminals in the United States and that the cost of handling amounts to more than half the total cost of transportation, which again amounts to one-third of what the ultimate consumer pays for his purchases.

At Los Angeles harbor cotton need be handled only once, from car to ship, unless the shipper himself wants it to be warehoused or recompressed. And if high-density recompression is desired, the extra handling and other expenses are very much more than compensated by the reduction in marine freight charges due to the lesser bulk attained.

All dock prices are very low. Bales may be compressed, or recompressed, at \$1 each, including handling; weight sheets cost 12 cents per bale; storage in warehouse from 10 to 15 cents a month, according to density, etc.

Los Angeles is the terminus of the Atchison, Topeka & Santa Fe, the Northwestern-Union Pacific and the Southern Pacific transcontinental railroads, all of which connect with the harbor. The yards of these lines have a capacity of 25,518 cars.

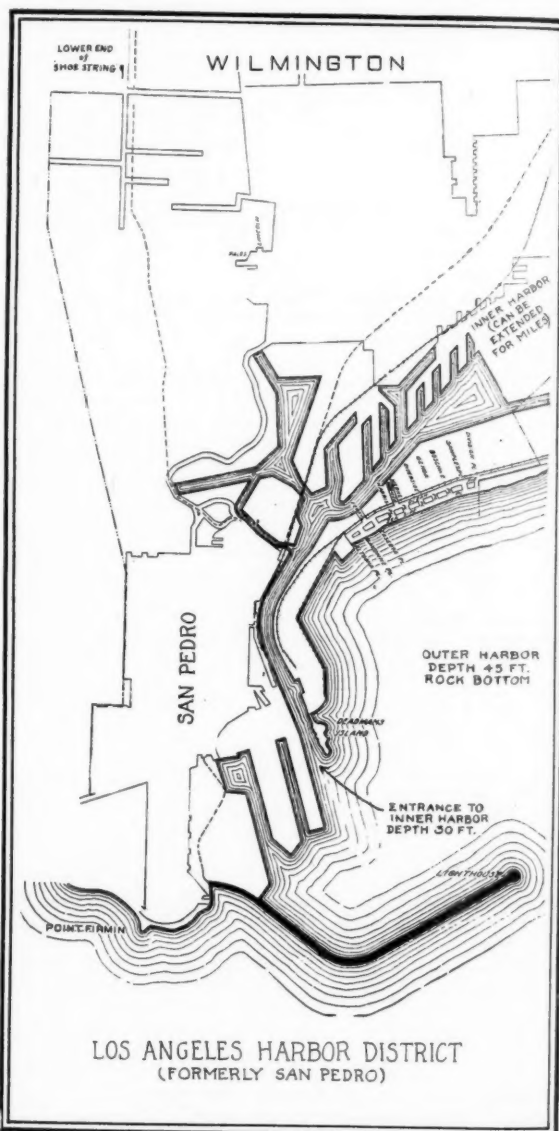
Los Angeles, being a comparative newcomer among the great cities of the Pacific Coast (among which it now ranks first in

population), has had for that reason to overcome sundry technical difficulties, the most trying of which had to do with its standing as a "port" and with the freight rates it has had to pay.

"Port" is a highly technical term, and has called for a good deal of defining. For a long time any city on tidewater was considered a port on the coast, although this made a port of Sacramento, for instance, a very small city 100 miles from the ocean, to which only shallow-draft vessels could come, and excluded Los Angeles, only 15 miles from its splendid harbor at San Pedro. For years Los Angeles had to pay 25 cents a hundred pounds over and above the rate to San Pedro on all its freight, although all-rail freight reached San Pedro by way of Los Angeles. This, however, was ended in 1909 by the annexation of San Pedro and of a narrow strip of the land, then mostly rural, some 15 miles long, that connected the two. This strip is known as the Shoestring.

By this annexation San Pedro got aqueduct water and aqueduct electric light and power and other municipal advantages, and Los Angeles attained its ambition to be a port and did away with the extra 25 cents per hundred it had to pay on its freight. As Los Angeles now contains 363½ square miles and stretches 43 miles from north to south and about 30 miles from east to west, this saving has been of considerable importance.

The next trouble, already touched upon, lay in the parity granted by the railroads to all Pacific ports. Until recently this



caused little friction. The advantages and disadvantages to each port seeming to even up fairly well.

The sudden expansion of cotton growing in the Southwest, however, changed the relations of the three great ports, Los Angeles, San Francisco and Seattle. Los Angeles insisted that she had abundant facilities for ocean shipment to all parts of the globe, and she objected strongly to having the products of her own "hinterland" shipped to ports 500 and 1200 miles farther north at the same rate that she had to pay, especially as the main steamship lines from Seattle are run (fide Los Angeles) by the Japanese, who are not a little bit popular on the coast. Also she objected, very logically, that in these days, when every freight car is in such demand, it was a sin and a shame to use cars in utterly needless and unprofitable hauls of hundreds of miles farther north.

Protests to the United States Railway Administration last spring were unavailing, probably because it was thought best to leave the matter to the different roads, which were so soon to resume possession of their properties. But the new railway law, which came into force on March 1, provided that no existing rates should be reduced for six months—until September 1, 1920—without the consent of the Interstate Commerce Commission. Finally, however, a request was made by the Pacific Coast railways, combined in the Pacific Coast Freight Bureau, for permission to reduce the rates on cotton from Arizona points to Los Angeles, and this permission was granted on July 28.

This reduction is even more important than it seems, as it will apply to the cotton rates from Texas and Oklahoma via Arizona. But its chief importance, in fact, its transcendent importance to Los Angeles as a port, whether for cotton or any other commodity, lies in the fact that it must inevitably turn to that city a great deal of export freight that has been going northward, as already pointed out, and this freight accession will very quickly end all hesitancy of steamships and steamship lines to touching at Los Angeles. The certainty that some 300,000 bales of cotton will be available there for shipment will do away during the season with all fears of not being able to find cargo and will draw the ships, and the presence of the ships will, in turn, cause the shipment to Los Angeles from Southern California and Arizona of many commodities that now go northward because they fear a lack of ships.

And so the natural advantages of Los Angeles as a port will come into full play. The city is so located that it is nearer than any other American city to many of the lands bordering the Pacific. The "great circle route" which ships follow in going to and fro between the Panama Canal, on the one hand, and Manila, Nagasaki and other Atlantic ports on the other, runs within 70

miles of the Los Angeles breakwater. Cotton from Texas and Oklahoma for Chinese ports will be in this "shortest line" almost as soon as it leaves Los Angeles.

Conversely, a very large part of the raw materials of the Pacific lie close to Los Angeles' doors. Rubber, tin, wool, hides, spices, teas, hemp, sugar, hardwoods, vegetable oils, camphor, copra, tobacco, jute and scores of other commodities can be brought in at low cost, made into finished products and sent further. (Los Angeles manufactured \$350,000,000 worth of goods in 1919.) The city is, of course, much nearer to the west coast of South America than is any other coast city.

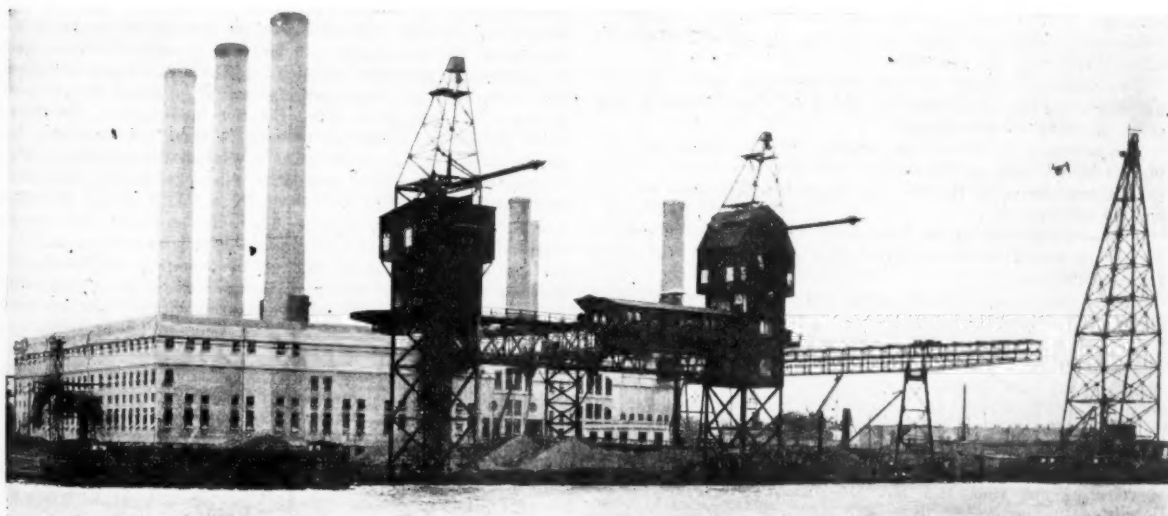
More than two-thirds of the United States is nearer to Los Angeles than it is to any other coast city. Los Angeles, as a matter of fact, is by longitude 95 miles east of Reno, Nev.

Extension of Northeastern Louisiana Gas Field.

Monroe, La., August 21—[Special.]—The proven gas field of this territory has been extended 10 or 15 miles to the west in Ouachita parish by the discovery of gas at the well of Morris & Quigg Company near the Cheneire break west of Ouachita River, close to the Lincoln parish line. The well developed gas last Sunday under strong pressure. The flow has now been checked, and it is understood the drillers will go deeper for oil. The discovery has created much interest here, as it is likely to be the signal for the development of the carbon-manufacturing industry on the west side. Steps to find oil or gas there have heretofore been unsuccessful.

The far-reaching campaign for oil in Northeastern Louisiana, which began nearly a year ago, and which has resulted in the estimated expenditure of \$15,000,000, is now being brought to a close by some of the developing companies in this territory. Among those that will make final test this fall are the Transcontinental Oil & Gas Co., Ridge & McLaughlin, Sterling Oil & Gas Co., Parker & Humble and Bell Oil & Gas Co. The Parker & Humble well is on the J. Harrison Rhymes farm, four miles south of Monroe; the Ridge & McLaughlin well near Jones, Morehouse parish; the well of the Sterling Oil & Gas Co. 10 miles southeast of Jones, in Morehouse; the Bell Oil & Gas Co. 15 miles southeast of Jones, near Bastrop, Morehouse parish, and the Transcontinental Oil & Gas Co. in Union parish, on the D. F. Redden farm. All these wells have had showings of oil and gas, but the final test will be required to prove that oil has been found in paying quantities. If oil is not found, the wells will be converted into gassers or wholly abandoned.

WESTPORT POWER-HOUSE OF CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE.



The above structure, now nearing completion, has been under almost continuous construction for the past 15 years. It has a capacity of 120,000 K. W. The construction department of the Consolidated Gas, Electric Light and Power Co. has occupied the position of general contractors in all the construction work done. The chimneys were erected by the Alphons Custodis Chimney Construction Co. of Baltimore. The steel for the first coaling tower was supplied by the Chesapeake Iron Works, and the steel for the second tower supplied by the American Bridge Co., both of Baltimore. The hoisting equipment for both towers was supplied by the Mead-Morrison Manufacturing Co. of Boston. The steel for the aerial cable towers was supplied by Chesapeake Iron Works and the hoisting equipment for the cable by the Lidgerwood Manufacturing Co. of New York.

The Efficient Private Secretary.

Mr. Henry D. Lindsley, who is now treasurer of the American Republics Corporation, has put on paper some thoughts regarding the functions of a personal and private secretary to an executive. Mr. Lindsley, who started his business life as a stenographer, has come to believe that the secretary to an executive is one of the most important persons involved in successful business administration.

The value and qualifications of a secretary to an executive is determined by separating the functions of the executive and of the secretary, and indicating how they should be correlated.

An executive in business life is one who himself, and in co-operation with others, conceives, plans and directs enterprise.

He must be a dreamer and a doer. He should be free from routine. He should not have an obligation on his time except as connected with a new or directing thought. In his desk there should be no drawers. Of pigeon-holes he should have no knowledge. On his desk there should be no papers. His aim should constantly be to work himself out of a job—to do nothing which someone under him can do.

Having eliminated himself from all obligation to work, he is now prepared for work. Quantity as applied to work should have no meaning to him. Quality should be everything.

When an executive has decided a thing, he should immediately turn its execution over to another. Often that other can be the secretary of the executive. The executive should have no further thought of such matter other than as it bears on other problems he must decide. That one to whom he has turned over the job should assume responsibility for possible failure, and failure involves time extended beyond what should be, as well as actual final collapse.

An executive and the secretary of the executive must train together. Each has to in part train the other. This can only be accomplished by a clear and continuing conception of the relative duties of the executive and secretary of the executive.

These are some of the fundamental qualifications which should be found in the secretary of the executive: character, health and habits should be of the best. Education should be good in literature, mathematics and economics, and interest should be evinced in organization, efficiency and statistics. The secretary should be a good and rapid penman; should have agreeable address and steadfast courtesy; should have dependable memory; should be orderly and systematic; should have energy and perseverance; should be an accurate and rapid stenographer and typist. All-around qualifications of a secretary are more important than specific training as stenographer and typist.

The secretary should conserve the executive, not only by attending to those things turned over by the executive, but also by attending to those things which come directly to the secretary by reason of position and which the secretary can attend to as well as, or better than, the executive.

The secretary should see that the executive has no routine matters whatever. Papers accumulated on the executive's desk reflect discredit on the secretary.

The secretary should assume responsibility for seeing that the play of events move as determined. The secretary should see that those things agreed by the executive to be done, are done, without specific instructions.

The secretary should see that when the executive decides a matter, its execution passes to the right man, and that the job is followed through.

The secretary should never bring matters to the attention of the executive except at two times:

1. When it is desirable to get immediate decision.

2. When the secretary is going over with the executive those things which have during the day accumulated, and with regard to which it is necessary that the executive reach decision.

The method of the secretary in this particular should be just the opposite of the executive. The secretary should accumulate matters which require the decision of the executive, settling many matters at one time and not unnecessarily interrupting the executive.

The executive should immediately turn over to the secretary those matters on which he has reached decision.

The secretary should be a constant student of those problems for which the executive has assumed responsibility and should thus prevent misdirections and mistakes.

The secretary should see that every part of the machine moves just when it should move, anticipating demands on the executive's time, and understanding where that time may be employed to greatest value.

The secretary should study the executive, his habits of work, his ineffectiveness as well as his effectiveness, so that quietly, unostentatiously, surely, things that the secretary can do as well, or better than the executive, will be done by the secretary.

The secretary must look into the future, visioning the executive's time and the demands upon it, understanding proportion and having perspective.

The secretary must see that each one who through him or her reaches the executive, or attempts to reach the executive, has a pleasing result. This has nothing to do with decision. It involves method.

The secretary should have on his or her desk every problem which the executive has started, and should see that each problem moves to its promised and best conclusion, and that the executive's thought is redirected to each at the right moment.

The secretary must never forget. Not only that—the secretary must remember at the right time.

In completion of a task the secretary has no knowledge of the clock. That sense of personal responsibility which causes each task to be accomplished with absolute accuracy also involves ability to complete each task within its allotted time. In the business game the clock-watcher remains to the end where he or she belongs—a clock-watcher and a time-server.

The secretary should be authority on system—not alone its theory, but its practice. The secretary should know where his hand can be laid, and instantly, on what the executive seeks. More than this: When the executive asks for a subject, the secretary should bring to his attention related subjects, that the matter in its broadest aspect may be before the mind of the executive, in order that he, in the shortest time, and with the greatest opportunity for accuracy, may decide.—From the Chemical Bulletin, Published by the Chemical National Bank, New York.

[The foregoing pertinent suggestions on the qualifications necessary for an efficient private secretary are equally as applicable to all assistants in whatever capacity, and to every worker who is a real worker at heart, and not a time-server. There is only one way to reach the fullest measure of satisfaction and content which is permitted in this life, and that is to know your job and to do it, to give full measure of service, pressed down and running over. Study your job!—Editor MANUFACTURERS RECORD.]

Texas May Build and Operate Cement Plant.

Austin, Tex., August 20—[Special.]—With no signs of early improvement in the cement situation in Texas, the agitation in favor of the State building and operating a plant for the manufacture of the material is growing. At the last special session of the Legislature a committee of members was appointed to investigate the question of the State entering into the manufacture of cement and to report at the coming regular session, which is to meet next January. In addition to this legislative investigation, the Texas Road Builders' Association, through R. G. Tyler, president, has appointed a committee to make a similar investigation. This committee is composed of Prof. F. E. Giesecke, Austin, chairman; D. D. Panas, Houston; R. J. Potts, Waco; J. M. Howe, Houston, and R. V. Glenn, Fort Worth. There are at present five cement manufacturing plants in Texas, and according to builders and contractors, these concerns are entirely inadequate to the demand for the material. Big quantities of cement are now being shipped to Texas from Oklahoma, Kansas and other States. Efforts have been made to purchase cement from mills as far away as San Francisco, but without success.

Dr. J. C. Nagle, dean of the Department of Engineering of the State Agricultural and Mechanical College, who has gone to considerable trouble to investigate the cement shortage and the possibilities of the State engaging in the industry of manufacturing the material unhesitatingly says that there is room for another cement mill in Texas. He points out that the annual demand for cement in this State in ordinary building activities is about 2,000,000 barrels, and that an additional 1,000,000 barrels are needed for highway construction. The total capacity of the cement mills of Texas is about 500,000 barrels short of the present annual demand of the State, and this shortage will become greater as the building development increases.

"The Age of Advertisement and the Real Meaning of Advertising"

By GEORGE BATTEN COMPANY.

It is the habit of mankind to realize the significance of facts only after they have become history. We are much more likely to make reference to "the good old days" than to the good days of the present. Consequently we seldom put a true value on our great men until we write their obituaries or biographies.

It is the same with advertising. It is true that President Lowell of Harvard, with the true vision of the scholar, has characterized and particularized our present day as "the age of advertisement." It is true that all of us are daily assisting in work that would seem to men of the Civil War period as miraculous as the work of the X-ray. It is true that we wield an instrument for shaping public opinion that would make old-time directors of public opinion like Cicero or Martin Luther or Abraham Lincoln gasp and stare.

But we handle this instrument perfunctorily—without wonder or excitement. And yet, I believe that the future will point back to our present years as the Golden Age of Advertising. This period will be searched and quoted for precedent in the textbooks that will be written.

Now, it seems to me that we may believe without being vain and presumptuous that the Golden Age of Advertising—the age of early exploration and fundamental experiment—will appear in the future as a matter of major importance—as a subject well worthy of serious study and analysis.

And here are the reasons:

Discoveries and inventions leading to new lines of activity fall roughly into major and minor classes. They may be distinguished by the answers to several questions.

First, does this new invention under examination merely add speed and convenience to human work, or does it really expand the scope of human life? For instance, a labor-saving invention is of minor advantage where workmen are plentiful, whereas the invention of printing is everywhere and under all conditions of major importance, since it will lift a low civilization to a higher plane.

A second test question is, Does this invention affect many or few of the human race?

Thirdly, is the effect of this invention superficial and temporary and governed by changing fashion, or is it deep and permanent?

Let us not take the time to examine advertising by these facts, or to enumerate its well-recognized effects in making the life of Americans broader and fuller, more safe and more enjoyable, or its effect in building public confidence in our commercial system, or even its effect of cementing our nation by teaching the various sections of our country that the men of other and far-away sections have the same ideals of decency and honor as they themselves.

It is better to review an aspect of advertising which makes it unique among commercial methods and which proves it to be anything but superficial and temporary in its effect. That aspect is the point of view that advertising gives—and not only gives but forces upon—its practitioner.

First, no man ever does real advertising without expanding his own horizon. Many a man who was local-minded has been forced by the very progress of his advertising into national-mindedness. For national-mindedness is merely that quality of mind which embraces an understanding of the habits of life and ways of thinking of many localities. The man who has successful business relations with representative houses in all of the States has the national mind as truly as a Secretary of State or a Justice of the Supreme Court.

Again, advertising enforces upon the advertiser the practice of honesty. It is an organism which the instinct of self-preservation automatically urges to cast out the crook exactly as our physical bodies strive to cast out the unwholesome foreign substance.

Thirdly, advertising forces upon its practitioner, to a greater degree than any other method of commerce, the application of foresight based upon accurate knowledge of the essential facts. If a man buys land, buildings or machinery unwisely, he can recoup a part of his losses by selling at a sacrifice, but if he has spent

his money on advertising based on false premises, he has no recovery.

Last, and most important, advertising forces upon the advertiser a revelation of the enormous influence in human affairs of the unseen and the intangible. He learns to spend his money on ideas as confidently as previously he spent it for bricks and steel. Previously, he may have pattered glibly of supply and demand, but his advertising forces upon him in sharp relief a new comparative valuation of supply—that is, the material things—and of demand—that is, the human need guided by public information—both intangible things and both paramount.

These are great lessons. And the noteworthy fact is that they are not merely laid open for the advertiser to learn if he will, but are forced upon him by the very doing of his advertising.

Hence, it comes that, after talking commerce with men who do not believe in advertising, you pass to a discussion of the same topics with advertisers, you come to a new language, a new style of reasoning, a new set of values, and a new view of the world.

Certainly a line of activity that so teaches such lessons is not to be classified among the minor matters of civilization.

So much for the effect of advertising upon the advertiser. Its effects upon the public are known. There are one or two less known facts about copy—the visual thing in advertising—about that which the public reads and heeds, which have a bearing not merely on the effectiveness of advertising, but on its permanency.

Most of the following points are predicated on a distinction in the field of advertising. There are two ways in which advertising works. We usually think of the effect of advertising as the conscious effect upon us. For example, we are interested in buying an automobile. We buy a magazine. We read all of the advertisements of automobiles as though they were catalogues. That is perfectly plain. That is no different from reading catalogues or reading letters.

But that is not the main function of advertising. It isn't the way that most advertising results are accomplished. The greater result is the unconscious result.

The instrument of advertising is the greatest power in human affairs today. Properly used, its influence is greater than that of the soldier or the politician, because their power depends on public opinion, whereas advertising shapes and molds public opinion. Its power is greater than that of the orator, for he addresses only a fraction of the audience reached by the advertising campaign. It is greater than that of the editor, because the editor speaks through only one publication, whereas the advertiser speaks through many. Furthermore, the editor may not repeat, lest he incur the charge of tediousness, whereas the essence of advertising is to repeat and keep on repeating its message until the public accepts and believes.

It is only of recent years that this view of the transcendent power of advertising has clarified itself. Years ago each advertising campaign was regarded as a bit of a venture, and as it gradually revealed itself as a success, we heaved a sigh of relief. Not that we expected failure, but we had not learned some of the facts which we now see as guarantees that not blind chance, but fixed law was at work.

Even today many men look on advertising as rather blue-skyish. It is not so. The success of scientific advertising rests on bedrock facts, on laws that make man man, that differentiate him from the brute.

The effect of advertising is founded on two innate necessities of human nature, working constantly in us, and most of the time unconsciously. These are—to use non-scientific terms—man's impelling necessity of being always open to suggestion and impression, and man's impelling necessity of forming habits. These are two of the characteristics that make man man.

Let us look at them. When you were born, your mind was a blank. Today you know millions of facts about all sorts of things—wood, water, air, light, earth. How have you acquired these facts and impressions—your individual tastes in friends, in foods, in amusements, in work? A very tiny part of this sum total

of knowledge comes through education, through somebody pumping facts into you. Another tiny part comes through study, through your own trying to pump them into yourself. But the overwhelming majority came into you unfelt and unperceived, because the human senses must by the law of their existence lie open to suggestion and impression as the growing flower or leaf must lie open to the light and heat of the sun.

And we go through our whole life unconsciously receiving, classifying and storing up these impressions. They become our background of personality, our fund of experience, our basis for opinions. Among them are stored away our unconsciously-formed estimates of advertised articles.

But, you ask, if we are so helpless before these unconsciously-received impressions, how is there any stability in business? Why doesn't demand flop away from one line of goods as soon as another is widely exploited?

There are many reasons why, but there are two main ones in the field of this discussion. One of them is the closing up of channels of freely-received impressions. For instance, the baby soon learns from one group of suggestions which of the persons it sees is its mother, and from that time on that channel of freely-received impressions is closed up. Once our impressions concerning a certain attribute or thing have clustered and crystallized into a definitely-formed opinion, we become thereupon less open to impression along that line.

And then there is habit. Almost none of us is aware of the part that habit plays in our lives. Each of us has a business manager that steers us morning to morning throughout our lives. It is habit, and it governs all of our thinking and all of our action. Suppose when you awoke in the morning you had to go through a long process of reasoning to decide whether you would get up, take a bath or shave. Suppose it took a syllogism to decide which sock to put on first, or whether to put one or two on or none at all. If it were not that these actions are governed by habit, we should not be ready for breakfast by noon. Children start without habits and their early education is largely the formation of habits. Until habit is well established they make little mental progress. An idiot is an idiot because he has not learned to let habit govern his actions. A drunken man does ludicrous things because alcohol has deranged the habit department of his brain.

We have so much to do daily that calls for all the mental energy we have that we instinctively form habits to save brain-work. We go to the same clothier and the same grocer, the same shoe dealer, we buy the same newspaper and go to the same lunch place; first, because they are satisfactory, and, secondly, because we don't want the bother of looking up another.

This explains why advertising pays. Repeated advertisements put into thousands of people's minds the impression that a product is good, and habit keeps it there.

These are the bases on which the work of copy is founded. We are studying scores of technical problems to which we hope to find the scientific answers. Perhaps we are progressing slowly. Perhaps twenty years from now our conclusions will be out of date. But it is a comforting thing to know that these human bases of our work will never be out of date, and to know that the instrument of advertising will be effective until man devises a new method of acquiring knowledge, and escapes the impelling necessity of forming habits.

Coal and Coke Production Show Increase.

With the striking daymen back at work in Illinois and Indiana, production of soft coal during the week of August 14, says the United States Geological Survey, rose to the highest point attained in any week since last January. Preliminary estimates place the total output at 11,728,000 net tons, an increase over the last week before the strike of 848,000 tons, or 8 per cent.

Whether this increased rate of production can be long sustained remains to be seen. One element in the improvement was undoubtedly the accumulation of empty coal cars during the strike of the daymen.

Production during the first 193 working days of the last four years has been as follows (in net tons):

1917.....	341,425,000	1919.....	276,595,000
1918.....	362,923,000	1920.....	324,877,000

The year 1920, is thus 16,500,000 tons behind 1917, and more than 38,000,000 tons behind 1918, but is 48,250,000 tons ahead of 1919.

The nine anthracite carriers reported loadings of 35,058 cars of hard coal during the week ended August 14, the largest in any week since June 19. This indicates a total output, including mine fuel and sales to local trade, of 1,801,000 net tons.

The cumulative production since the beginning of the calendar year now stands at 54,117,000 net tons, an increase of 3,300,000 tons over the corresponding period of 1919. Practically all of this increase was attained during the first quarter of the year. Since the opening of the coal year (April 1) the present season has shown only a slight gain over 1919.

The production of coke, like that of anthracite and bituminous coal, increased during the week ended August 14. Preliminary estimates based upon incomplete figures of railroad shipments place the output at 417,000 net tons, an increase of 35,000 tons, or 9 per cent, over the revised figure for the preceding week. The increase was largely made possible by improved car supply in the Connellsville region, where production as reported by the Connellsville Courier rose from 194,140 to 219,440 tons.

The cumulative production since January 1, 1920, now stands at 13,210,000 net tons, an increase of 1,244,000 tons over the year 1919.

Dumpings at Lake Erie ports during the third week of operation of the amended Lake order were just short of the million mark. The total for the week ended August 14 was 994,425 net tons, of which 952,298 tons was cargo coal and 42,127 vessel fuel. This was not only the largest of the present season, surpassing by 161,724 tons the performance of the preceding week, but it was much larger than the tonnage of the corresponding week of 1919. The movement, however, has not yet attained the maximum which the ports can handle. In the week of August 17, 1918, for example, a total of 1,110,000 tons was dumped.

The total Lake movement since the opening of navigation now stands at 8,641,000 tons, as against about 14,365,000 in 1918 and 15,000,000 in 1919. The year 1920 is thus over 5,500,000 tons behind 1918 and six and a third million behind 1919.

Tidewater shipments declined slightly during the week ended August 14. The total number of cars dumped over tidewater piers (in part estimated), according to reports furnished the Geological Survey by courtesy of the American Railroad Association, was 25,740, as against 27,464 during the preceding week. That the movement was nevertheless very heavy is seen from the fact that it exceeded by 2120 cars the weekly average for July.

Adding to Texas' Wealth by Irrigation.

El Paso, Tex., August 21.—[Special.]—An addition of nearly 10,000 acres of arid land in the upper valley of the Rio Grande was reclaimed during the year ending June 30, 1920, according to L. M. Lawson, project manager of the Elephant Butte irrigation project. This brought the total cultivated acreage up to approximately 80,000 acres upon which crops to the value of \$3,825,107 were grown during the year. An additional 10,000 acres will be reclaimed during the current year, it is expected. At this time there are 2955 farms being irrigated, as compared with 2703 for 1919 and 1700 in 1915. Residing in towns and on farms in the irrigated territory are 110,556 people, 8000 more than in 1919 and 20,000 more than in 1915. Since 1915 bank deposits have grown from \$19,916,380 to \$34,557,984, the amount on deposit at the beginning of the fiscal year. The total marks a gain of more than \$1,500,000 during the past year, and nearly \$15,000,000 since 1915.

The acreage actually in irrigation during 1919 exceeded 70,000 acres, less than half of the 155,000 acres which will be irrigated when the Elephant Butte project has been developed to its maximum.

Of the crops produced on irrigated lands in 1919, alfalfa still retains an unquestioned supremacy. The 1919 alfalfa crop was valued at \$1,700,000, giving a gross return of about \$56.90 per acre planted.

Wheat and corn ranked second and third in importance, though cotton, truck gardening and cantaloupes were grown in abundance.

The present drainage plans complete will involve the excavation of more than 15,000,000 cubic yards of dirt, more than half of which already had been done. The lowest of contract prices for excavating fixed an estimate of 11 cents per cubic yard. Government forces, however, have carried on the work, excavating more than 8,000,000 cubic yards at a cost of 8.13 cents, a saving of about \$250,000.

THE IRON AND STEEL SITUATION

Connellsville Coke Production Increases—Pig-Iron Shows Some Advance—Transportation Improved.

Pittsburgh, Pa., August 25—[Special.]—Production of Connellsville coke has undergone a further and larger increase. Last week it was noted that the Connellsville Courier report showed an increase in output in the Connellsville and Lower Connellsville region from one week to the next from 172,870 tons to 194,140 tons. Now another week is reported upon, with 219,440 tons production, this showing an increase of 25,300 tons in one week and an increase of 46,570 tons in two weeks, or 27 per cent in just a fortnight.

Thus far the effect upon the market of heavier production has not been very marked, the slowness of the action being probably due to the fact that the increase was chiefly by the furnace ovens, the merchant ovens showing a much smaller increase. Thus not much more coke has been put into the market, but the producer-consumer class is much better supplied and thus will not have to come into the open market so much to eke out their own supplies and thus eventually the market is likely to feel the influence very distinctly. There is also the influence of the great decrease in prices obtainable for Connellsville coal, a decline decidedly greater than has occurred in the Pittsburgh district coal market. The spot furnace coke market the past few days has been rather weak at \$17.50 per net ton at ovens, this comparing with the market that ruled for several weeks of \$18 to \$18.50, with a strong leaning toward the higher figure.

Pig-Iron Advance.

The whole pig-iron market has shown an advancing tendency, but in Bessemer and basic the sales have been so light and have been so largely under special conditions that the precise level of the market at present cannot be named. The last clearly-defined prices were \$47 for Bessemer and \$46.50 for basic at valley furnaces.

In the case of foundry iron there is no doubt. It has advanced squarely from \$46 to \$50 valley, or \$4 a ton. There seem to have been few, if any, sales at intermediate prices. While the sales at \$50 total only a few thousand tons, and thus are vastly less than have ever before occurred with anything like such an advance in prices, the sales are amply sufficient to establish the market level, some being for prompt shipment, but a few for shipment during the remainder of the year.

Before the advance the furnaces were discussing the question whether they ought not to pass on to pig-iron buyers the freight increases that must be paid, beginning August 26, on the raw materials assembled by blast furnaces, coke, ore and limestone. In the case of valley furnaces the increases, at the 40 per cent advance over existing rates, were computed to amount to between \$1.50 and \$1.75 per ton of pig-iron. It now turns out that pig-iron advances \$4. This is f. o. b. furnace, so that the pig-iron buyer pays in addition the increased freight on the pig-iron. To Pittsburgh consumers this is about 60 cents, as the old valley-Pittsburgh rate was \$1.40, while more removed consumers must pay more, and to New England consumers the advance in the pig-iron freight, apart from the advance in the f. o. b. furnace price, will be in the neighborhood of a couple dollars a ton.

The advance in pig-iron is very objectionable to consumers, while it is viewed with considerable alarm by some producers. Naturally the tendency will be for consumers to hold off as much as possible, but as barely more than four months of the year remain, the consumers cannot well avoid covering for the balance of this year.

Price Alignments.

Prices for the successive materials, from ore to finished steel products, are altogether out of line, so that there can be no confidence in the market since adjustments must eventually be forced. That the market has succeeded in getting so out of line is due partly to the fact that consumers of the various materials are largely producers of the materials and thus do not have to buy in the market, while those who do use purchased materials are dependent largely upon old contracts. Thus while Connellsville

coke for spot shipment is \$17.50, some consumers are getting coke on contract at well under \$10. While pig-iron is \$50, some consumers are getting deliveries at around \$30.

As to actual prices current in the market, however, it is to be noted that with 2200 pounds coke consumption per ton of pig-iron, \$17.50 per net ton at ovens for coke would, with a 40 per cent increase over the present coke freight at \$1.80, make the valley furnace pay about \$22, all told, for the amount of coke needed to make a ton of pig-iron, hence \$50 for pig-iron would be altogether too low. Again, assuming Bessemer and basic iron to be \$50, as they will be eventually if foundry is \$50 or higher, there have been several sales of billets at the reduced price of \$60, which is altogether too low for \$50 pig-iron. Finally, for six months or so some large independent steel mills have had uniform prices on merchant bars and shapes of \$60 per net ton on bars and \$62 on shapes, these prices being quite out of line with billets at \$60 a gross ton.

Thus, if the real value of coke were anything like \$17.50, pig-iron would have to be much higher than it is, billets would have to be very much higher still, and bars and shapes, to be in line with billets, would have to be almost out of sight. But instead of its being feasible for bars and shapes to rule at much higher prices than \$60 and \$62, respectively, there is the very practical fact that since March 21, 1919, the Steel Corporation's prices have been \$47 for bars and \$49 for shapes, and the Steel Corporation makes about 45 per cent of all the steel. Thus it is quite clear that readjustments must occur in the market structure as a whole. They must occur one way or the other, and the balance of probability seems to be that the independent steel prices will eventually come down to the Steel Corporation level, while billets, pig-iron and coke will sag so as to be at least somewhat in line with the finished steel products.

Transportation.

The large improvement in the movement of cars engaged in the Connellsville coke trade has been noted above, as the increase in coke production is due entirely to this influence. At the blast furnaces and steel mills the supplies of cars have in general increased somewhat further in the past week. The situation seems to be now that at least as much pig-iron and steel is being shipped as is being made. In some cases producers are shipping less than they make, while in other cases they are shipping more and picking up some of the material previously piled. The influence upon the market of the heavier receipts of material is not marked, perhaps because on account of embargoes and other influences the shipments are very far from uniform to the various consumers. Some are well supplied, while others receive scarcely anything. In general, however, there seems to be a somewhat easier situation. It is not known what stocks are being carried, but some consumers are probably well stocked, others having nothing at all.

There is almost as much complaint about transportation conditions as at any time, but this is probably due to conditions not being as good as shippers expected them to be by this time. A fresh trouble has just come up, in that the Pennsylvania has issued an order prohibiting the loading of coal cars in the direction of the coal mines, something the Interstate Commerce Commission permitted in its general coal mine car preference order. The Pennsylvania officials felt they were not moving their coal cars fast enough. Possibly they had something else in mind also, for it is known in the trade that the permission was being misused, in that some cars have been loaded to points near coal mines, where it was found the railroad agent was not fully instructed, and then reconsigned, by payment of additional freight, to points beyond.

Demand Prospects.

The railroads are not likely to buy many more cars and locomotives in the near future, but the car and locomotive shops appear to be well filled with orders to the end of the year, partly on new equipment and partly on repair work, which is going to be extensive for a long time. During Government operation, and since, there has been a great deal of light repair work done when eventually heavy repairs would have to be made. There is some tentative inquiry for rails against the 1921 season, but they are not progressing rapidly, as the mills demand advanced prices.

The automobile industry has slowed down. This makes very little difference to the steel industry as a whole, for operating at capacity the automobile industry could not engage more than 7 per cent, at the outside, of the steel-making capacity. Probably a fair statement would be that the automobile industry was employing about 6 per cent of the steel-making capacity and is now employing about 4 per cent. The 2 per cent loss is too small to be noticed.

Wide Demand for Southern Pig—Production on the Increase.

Birmingham, Ala., August 23—[Special.]—One of the larger pig-iron manufacturing companies in the Birmingham district is out of the market for a while and two smaller concerns are holding off a little, inquiries for the product being numerous. Sales of pig-iron booked for delivery during the first quarter of the coming year are beginning to aggregate nicely, and predictions are that the last month of the third quarter of this year will see a large proportion of the probable make of the first three months in 1921 disposed of. The greater amount of the new business coming in is sent from agencies in the middle West, Chicago, St. Louis and Cincinnati, though many small inquiries come from as far away as New England States, up in the Northwest and even out in the West. The new freight rates soon to start in has brought about no terror in the pig-iron market, and indications point to all consumers to report activity right along for some time to come. There has been but a slight improvement in the railroad car situation and delivery has been only equal to the present production of late. The accumulated stocks still show some size, a month's make at least to be gathered, in case there was need for immediate iron. It is hardly believed there will be any material improvement in the delivery of pig-iron this year, though constant requests are being filed with the railroad authorities in this section for cars with which to move out the product. The make in Alabama is holding up nicely and August will report as much pig-iron as did July, when the figures went above the maximum of any month for more than a year and a half. The furnace companies report some activity in raw material supplies, efforts being made to bring in as much ore as possible, besides coal, coke, limestone and other products. There is not much surplus material to be seen in this district except with the Republic Iron & Steel Co., which concern has on its yards at Thomas, part of Greater Birmingham, not less than 30,000 tons of coke. This company has two furnaces in blast and the third iron-maker ready for the torch. The accumulation of coke, with the strike on, means much and would come in very handily if there was need for same. There is no lack of energy with any of the iron companies in this district in looking after the raw material supplies. The strike in the coal mining section has not, as yet, interfered with the make of furnace coke. The depressed railroad service has not interfered thus far with the prompt handling of raw material for furnaces. There has been sufficient labor at the furnaces and at ore mines and coke plants. The furnace companies are still pressing their petition to the Alabama Public Service Commission, asking that there be no increased freight rates allowed on assembling raw material for the furnaces.

There is very little spot iron available right now, though it is possible that some iron may be offered during the last quarter of this year. Business is being offered steadily, and those companies of the opinion that they can meet conditions set out are booking the orders right along. There has been some iron sold for delivery during the first half of next year, though the bulk of the 1921 business was for the first three months. The quotations on the 1921 sales are on a basis of \$42 per ton, No. 2 foundry. Sheffield, Ala., has been selling a little iron at \$43 per ton. For a while Birmingham spot was heard of at \$43 and even \$44 per ton, No. 2 foundry, but the general price, for last quarter of this year, if to be obtained, and for the first half of next year, is around \$42. Charcoal iron has sold as high as \$60 per ton, f. o. b. furnace, but steady quotations if \$55. The sales of pig-iron in this district recently have ranged between 100 and 1000 tons.

The Alabama Public Service Commission's hearing upon application of the railroads to be allowed 25 per cent increase intrastate rates, same to be made simultaneously with the interstate rates, was held in Montgomery August 17. There was no expressed opposition on the part of the shipping public of the

State to the increase asked for, but many protests were on file with the commission, as well as shippers present, as to service being furnished by the railroads. Doubtless the commission will announce its decision at an early date, and the opinion is expressed that if other Southern States allow the increase the Alabama Public Service Commission will grant the Railroad's request. Effort is being made to have the commission understand that the industrial life of this State's burdens, due to lack of service, has reached a point where it was now up to the railroads to give relief, as there were on the yards of the manufacturing interests of this State, some 30,000 carloads of material, the value of which is \$30,000,000, and in some instances plants were carrying stock in excess of their capital, and with the interest and other carrying charges the burden was at the rate of about \$3,000,000 per annum, and this condition could not go on indefinitely and the cars must be furnished for early relief, as beginning the latter part of September the cotton movement would begin, and early in January the fertilizer movement; with both commodities it is necessary for cars to be furnished and prompt handling given.

Announcement is made that Birmingham has been made an industrial zone by the Government and a census is now being taken. This district has a large number and a varied assembly of industrial concerns, with a large complement of laborers. Recognition of the district in an industrial zone will bring attention in the future.

Contract has been let for about 25,000 feet of cast-iron pipe, 16-inch, to the United States Cast Iron Pipe & Foundry Co. for the extension of mains of the Birmingham Railway, Light & Power Co. to the by-product coke plant of the Sloss-Sheffield Iron & Steel Co., a contract being closed whereby the local concern will supply the people of Birmingham with gas, a cheaper rate than now in effect to be made. The Sloss-Sheffield Company is using some of its gas in the operation of its power plant, but there is a great quantity to be offered the city. The Sloss-Sheffield Company is electrifying its coal and ore mines, coal-cutting machines being installed at the Flat Top, Bessie and other coal mines. Other plants of the company are being operated with electricity.

The strike of the union mine workers in Alabama is on the wane. The domestic coal production is still off considerably, but by degrees old men are returning to work and new men are being brought to the district and placed at work. The greater number of coal operators of this State declare positively that there will be no recognition of the union, and that later will come the fight for the open-shop plan throughout the district in all lines. There are some who believe that the fight should go further—for non-union basis.

The coke make in Alabama is holding its own, about the same it was last week and the week before. The by-product coke oven plants are all doing well, repairs about the Woodward & Tennessee Company ovens being worked quickly. Home needs in coke are being met and a little of the demands from the outside. Much business is being offered, but finding no berth here. Independent coke makers assert that it is an easy matter to get new business if there was any hope of carrying out contracts as to delivery and make both.

The scrap iron and steel market continues strong, with inquiries now being made for the various products, small tonnages being sold and prospects bright. Heavy melting steel commands \$25 with the larger consumers in this district, but little under this price in their offers. Dealers are sounding out their sources of supply and find that they can get all the old material they will want if they will pay for same.

Quotations of pig-iron and iron and steel scrap in the Birmingham district are as follows:

PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$42; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$43.70; iron of 2.75 to 3.25 per cent silicon, \$45.50; basic, \$42 to \$43; charcoal iron, f. o. b. furnace, \$55.

OLD MATERIAL.

Old steel axles.....	\$33.00 to \$34.00
Old iron axles.....	33.00 to 35.00
Old steel rails.....	22.00 to 25.00
Heavy melting steel.....	24.00 to 25.00
No. 1 R. R. wrought.....	25.00 to 25.50
No. 1 cast.....	34.00 to 35.00
Stove plate.....	26.00 to 30.00
Old car wheels.....	33.00 to 35.00
Old tramcar wheels.....	32.00 to 35.00
Machine-shop turnings.....	11.00 to 13.00
Cast-iron borings.....	11.00 to 13.00

RAILROADS

To Connect Valdosta and Milltown.

It is proposed to establish railroad facilities from Valdosta to Milltown, Ga., by connecting the Valdosta Street Railway, the lumber railroad of J. N. Bray & Co. of Valdosta and the Milltown Air Line. The street railway is owned by D. A. Finley of the Finley Machine Works at Valdosta, and he, together with Bray & Co., have made a proposition to the business men of Milltown which will include the use of four miles of the Milltown Air Line, 15 miles of the lumber railroad and the tracks of the street railway. Only a few hundred feet of connecting track would have to be constructed. If the combination of interests is agreed upon and the connections established, motor cars will be operated between the two points for passenger and freight service.

New Equipment.

Tuckasegee & Southeastern Railway Co., building 15 miles from Sylva to Tuckasegee, N. C., expects to be in the market for some flat cars of 80,000 pounds capacity and some side and center dump cars. James E. Walker, Roanoke, Va., and others interested.

Among the locomotive inquiries reported in the market are these: Seaboard Air Line, some light Mikados; St. Louis-San Francisco, 10 consolidation; Atlantic Coast Line, 2 six-wheel switchers; Tennessee Central, some locomotives of the 2-8-2 type.

Atlantic Coast Line is reported to have placed equipment orders covering 30 Mikado type locomotives, 500 ventilated box cars, 400 coal cars, 100 phosphate cars and 28 passenger cars.

Seaboard Air Line is reported in the market for 300 phosphate cars.

Loan to the "Orient" Road.

A report from Kansas City says that Wm. T. Gemper, receiver of the Kansas City, Mexico & Orient Railway, has announced that the Interstate Commerce Commission has granted the road a loan of \$2,500,000 to pay off outstanding receiver's certificates and to maintain operation of the road.

Great Future Predicted for Galveston as Center of Fuel Distribution.

Galveston, Tex., August 20—[Special.]—J. A. Phelan, oil expert of the United States Shipping Board, after spending several days here investigating the port facilities for handling imports of Mexican crude petroleum, has gone to Tampico, Mexico, with the view of obtaining a complete first-hand knowledge of the oil production and transportation facilities of that region. He said that it was his purpose to make large contracts for fuel oil with companies operating in Mexico after he had investigated the situation with regard to various phases of the industry there. It was the expressed belief of Mr. Phelan that Galveston is destined to become the greatest distributing center for fuel oil in the United States. He made the forecast that within the next two years general shipping here will have shown an increase of 500 per cent. In addition to the large oil terminals already installed here, several large producing and refining companies are preparing to make this port the receiving and distributing point for their Mexican production, according to Mr. Phelan.

"Fuel is the greatest problem before the shipping board and the merchant marine," he continued. "Mexico is the greatest oil-producing country in the world. Galveston is the nearest port in the United States to Mexico."

"There is a tendency on the part of big shippers to get away from New York on account of labor and other troubles. Already Baltimore and Philadelphia have felt the benefit of this tendency and but for untoward conditions here Galveston would have reflected the same movement. With the amount of oil which I think undoubtedly will be available here within one year's time and the active co-operation of agents and citizens in bringing cargoes to Galveston, shipping from this port should assume five times its present proportions."

"The shipping board is buying, or trying to buy, twice as much fuel oil this year as it did last, and is paying more than twice the

price for it. Last year the 6,000,000 barrels purchased was sufficient, and this year the 13,000,000 barrels wanted will not meet the need. The shipping board is in possession of 70 tankers for the transportation of the oil, the greatest asset in the fuel oil business. These tankers are leased to big producing companies at present, but unless these companies can guarantee a sufficient supply of oil at a fair price the board is going to take charge of the tankers and handle its own supply within the near future."

Two Companies Manufacturing Oil-Well Supplies to Erect Plants in Tampico District.

Tampico, Mexico, August 7—[Special.]—Arrangements have been made by two companies, the Oil Well Supply Co., which has its principal office at Pittsburgh, Pa., and the Tampico Foundry, Machine & Supply Co., to build large plants upon La Isleta, an island which has a large frontage on the Tuxpam River near Tampico. These two corporations have purchased land on the island upon which they will locate their plants. The Oil Well Supply Co. will expend about \$400,000 in the construction of machine shops, warehouses, terminal and port works, while the Tampico Foundry, Machine & Supply Co., besides moving its foundry and machine shops to the new location, will expend about \$100,000 in new equipment.

The General Machinery & Supply Co. has also purchased additional land upon La Isleta, upon which it will build warehouses, terminals and make other improvements at a cost of about \$150,000. This company is preparing to install an electric department. Capt. W. D. Rodgers of Newark, N. J., was recently appointed sales manager. He is due to arrive in Tampico soon.

The Cia. Fundidora de Hierro y Acero de Monterey, commonly known as the Monterey Iron & Steel Co., has purchased land upon La Isleta, upon which it will build steel warehouses and terminals to facilitate the handling of its structural steel and other iron products. The plant of this company is situated at Monterey. A spur track will be built to connect this company's new terminal with the Monterey branch of the National Railways of Mexico. This will enable the company to handle its own traffic direct from Monterey without loss of time. The company owns its own cars and engines, which run between Tampico and Monterey from two to three times a week with material and oil.

The warehouses will be small, as the nearness of Monterey makes it impractical to carry a large stock here, it is explained. The company's idea in building a terminal here is to save time in supplying material to the oil fields of lower coast country.

TEXTILE

Ridgie Silk Co.'s Plans.

All plans have been determined and contracts awarded for the plant of the Ridgie Silk Co., Shinnston, W. Va., mentioned recently as organized with \$150,000 capital. This company will erect a two-story 100x50-foot concrete building costing \$30,000 and install 6000 spindles, with 65 horse-power electric belt drive power plant. Its equipment of mill machinery will cost \$60,000, with \$6000 as the cost of the electric plant, and the weekly capacity will be 2000 pounds of thrown silk.

Textile Mill Notes.

A one-story 110x82-foot brick addition costing \$20,000 will be built by the Paducah (Ky.) Hosiery Mills Co.

An increase of capital from \$500,000 to \$1,000,000 has been announced for the Miller Cotton Mills, Waco, Tex.

From 700 to 800 pairs of infants' cotton hosiery will be the daily capacity of the Texas Hosiery Mills, Dallas, Tex., which has organized, leased building and ordered machinery.

Gordon Bunker of New York, A. G. Couch, George Beveridge and K. L. Jones of Atlanta have purchased the Hutcheson Manufacturing Co. at Banning, Ga., equipped to spin cotton yarns. They have organized the Banning Cotton Mills to continue the plant, with Mr. Beveridge as president and Mr. Couch as secretary-treasurer.

MECHANICAL

Atlantic Coast Improvements in Bulk Cargo Handling.

In the last four years several factors among shippers of heavy bulk materials have caused a stimulation of interest in a cheaper and more rapid scheme of handling such commodities. The manufacturers of apparatus, especially the pioneers in this line, started a movement in this direction some twenty years ago, and succeeded in getting a limited number of plants installed as early as 1902. The development of plants for handling large tonnage of coal and iron ore was the most obvious necessity, and it was naturally the first problem attacked on a large scale. The necessity for such development centered around the Great Lakes region, and the pioneer installations were put in in this vicinity. The short season of navigation from the Minnesota, Wisconsin and Michigan ore fields to the blast furnaces of the lower lakes and the Pittsburgh District require a movement of 12 months' supply of ore in about seven months. The coal supply of the States bordering on the iron-ore region was largely taken from the lower lakes on the return trip of the ore boats. In order to perform this task with the minimum of equipment and operating costs per ton, it was plainly necessary to provide machinery for cheap and rapid discharge of cargo from ship to dock or railroad, and vice versa, the length of time the ship was tied up to the dock being a vital factor in costs. The result has been a high state of development and concentration of bulk cargo handling plants in the lakes region.

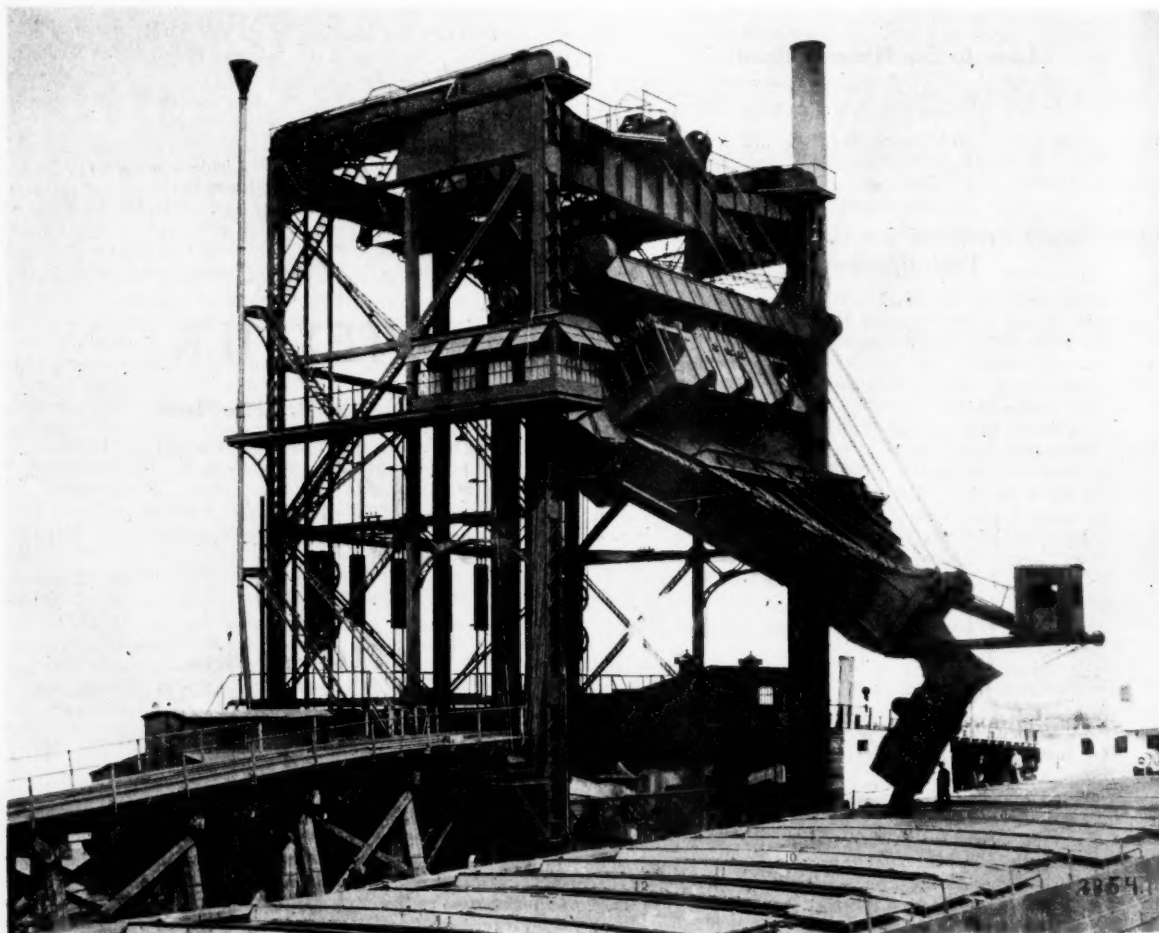
In the late nineties the Wellman-Seaver-Morgan Company brought out their ore unloader, each machine capable of handling ore at from 500 tons per hour upward. At about the same time



ORE-UNLOADING MACHINE AT WORK IN SHIP HOLD.

the car dumper, for overturning standard railway cars and dumping their contents, was developed. The latter have been evolved until at present they will handle 30 dumps per hour and upward, some installations handling as much as 3000 tons per hour of net material, two cars in tandem.

Conditions largely due to the European War caused a more general interest to be developed along our coast line in these



COAL CAR DUMPER TO BE INSTALLED AT PORT COVINGTON, BALTIMORE, MD.

methods. Prior to our participation in the war a few installations had been made on the Atlantic coast, especially in the line of loading cargo and bunker coal. Rising labor costs and necessity of rapid "turn around" on the comparatively few vessels available brought the issue of improved dock facilities to the forefront. It was a question of time, tonnage capacity over a given waterfront, and cost per ton. All the above items in the problem are satisfactorily answered by equipment of the type previously mentioned, and what was still more vital, the item of labor in normal volume being unobtainable at any price.

Two contracts recently secured by the Wellman-Seaver-Morgan Company on the Atlantic coast are interesting at this time. A contract with the Western Maryland Railroad Co. at Port Covington, Baltimore, covers a Wellman car dumper to handle 100-ton road cars. It is the first electrically-operated lifting dumper for seaboard coal loading to be negotiated. The lifting feature is designed to raise the road car high enough before overturning to cause the coal to run down the apron and chute into the ships' holds as illustrated. Dumping directly to the ship eliminates breakage and waste due to rehandling. The entire cargo is trimmed without the use of hand labor.

The machine consists essentially of a rectangular framework supporting a rotating cradle in which the loaded railroad car is held while discharging. An entirely automatic counterweight device clamps the car to the cradle, which is inverted by the revolving mechanism, carrying the car with it. The top of the cradle forms a chute for directing the material as it flows out.

This installation will have a nominal capacity of 30 to 45 cars per hour of cargo and bunker coal, principally for export. The coal is delivered to the dumper by the Western Maryland Railroad from the West Virginia, Virginia and Pennsylvania fields. One million tons will be handled annually, with a probable increase to twice that capacity later.

The other contract, which is with the Lehigh Valley Railroad Co., covers an automatic ore unloader carrying a 15-ton clamshell bucket on an unloader leg and designed to make a complete cycle or round trip in 50 seconds. The machine is electrically operated throughout, and is to be installed at the Claremont terminals, New York harbor, to handle ore from Cuba and Chile. A cost of pig-iron lower than cost based on domestic ore is predicted to result from economies effected.

The automatic unloader is unique in design and has proved most successful. Although of immense proportions, it has been simplified and control perfected to such a point that the machine is conspicuous for delicacy of control and operation.

The unloader consists of a main framework mounted on trucks which travel along rails. The framework extends back beyond the rear runway over a temporary storage pile, where the ore can be discharged if desired. It is then picked up by the ore bridge and carried to the stock pile. Between the front and rear runways space is provided for railroad tracks, where ore-carrying cars are placed under the machines and loaded with ore for transportation to the furnace plants. The girders of the framework form a support for runway rails, on which a trolley travels. This trolley supports a balanced walking-beam, from the outer end of which a stiff bucket leg descends, this to reach down through hatches into the holds of vessels. At the lower end of this leg is the bucket, which is operated by machinery located on the walking-beam. Only two operators are required for the entire operation of one of these machines, which it is not possible to illustrate in full for lack of space, but the operation of the bucket in the hold of a vessel is shown in the smaller picture.

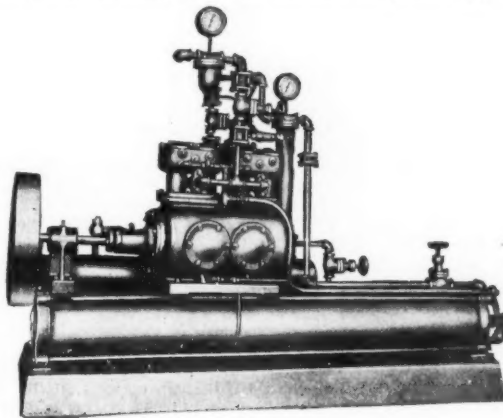
Some idea of the capacities of unloading by this method may be derived from a record which was made in Ashtabula, O., by eight machines of this type having a capacity of 15 tons each, unloading seven boats having a total capacity of 70,000 tons in 22 hours actual time. At other points, four machines working in boats having capacities up to 13,000 tons have unloaded these cargoes in about 3 hours and 25 minutes. About 97 per cent of the ore is removed from the boat without hand labor.

Records of 50 machines in operation indicate that this type of machine will handle ore at 2½ to 4½ cents per ton, including all fixed charges, and records of as high as 783 tons of ore per hour per machine from tie-up to cast-off of boat have been made.

A New Refrigerating Plant.

Marked innovations in design, with simplicity of construction and reliability, are claimed for a new refrigerating plant recently added to the manufacturing line of the Norwalk Iron Works Co., South Norwalk, Conn., widely known for 40 years as builders of air and gas compressors.

This refrigerating plant, which is shown in the accompanying picture, is of the multiple-cylinder ammonia compressor type, and



SIDE VIEW OF REFRIGERATING PLANT.

is supplied in capacities from one-quarter ton to 25 tons refrigeration for all ice-making and refrigerating requirements. It is furnished with motor or gas engine drive, and is thus equally suited to city or country use. The fundamental design is standardized, so that while the cylinders and operating parts are adapted to the various capacities, the principle of construction remains unchanged throughout the whole line. This, the company's engineers point out, has resulted in a degree of efficiency which would not otherwise be possible.

The internal mechanism is free from bolts and nuts. There is nothing to work loose, and the operating parts are few and strong. The drive is by eccentric shaft, and a feature typical of simplicity is the floating ring bearing used between the eccentric ring and the ring of the connecting rod. This ring bearing turns constantly under the action of the connecting-rod ring, and being of softer metal than the rings between which it functions, it takes all wear. The major parts of the mechanism are thus protected for long life, while the ring bearing can be replaced when necessary at trifling cost, and this idea of having the mechanism automatically safeguard itself is applied at all points. Graphite semi-lubrication is used instead of oil.

The refrigerating plant is the result of several years' experiments and tests at the factory. Without curtailing the manufacture of the company's general line of air and gas compressors, arrangements have been made to increase greatly the production of refrigerating plants.

Road Bonds Voted to Complete Link Between Charleston and Columbus.

Ripley, W. Va., August 21.—[Special.]—Only 18 votes were recorded against the proposal to issue bonds for the purpose of constructing a system of permanent roads in Ripley district at a special election held on August 17. There were recorded 754 votes for the bond issue, which will make possible the completion of a system of permanent roads from Charleston, W. Va., to Columbus, O., Ripley district being the last district to vote bonds. The road from Charleston to Columbus, now made possible, will be a part of the Federal highway.

United Peanut Associations of America to Meet.

The United Peanut Associations of America will hold a convention at Montgomery, Ala., on September 13 and 14, with headquarters at the Exchange Hotel. The subject of protection for the peanut industry will receive special consideration. Indications are that the meeting will be of much importance to all those interested in peanut growing and marketing.

Commendations, Kicks and Comments

Appreciation of Work in a Good Cause.

W. B. TROY, Chairman. The Power Farming Association of America.—Jacksonville, Fla.—The purpose of this letter is to show appreciation for the publicity attention you have rendered to the several communications going to you with reference to the Power Farming Association of America, and to congratulate you on your existence away from the easy-followed "beaten path." It must be to your satisfaction to know that the people of the United States are "beating a path to your door," for your form of agreement that executes "with conscience void of offense towards God and towards men."

There is neither water nor politics in the Power Farming Association, nor profit, save that which accrues to those whom an honest purpose is serving.

Since March 17 last we have served a power-farming menu direct to over 8000 guests, at a cost of \$1142.60, without a credit entry on the trial balance in the value the MANUFACTURERS RECORD, the Florida Times-Union and the no less important influence that the weekly press, with their circulating farm-home's sentiment, have given this cause.

How a Live Texan Views the Manufacturers Record.

JOHN W. DUNN, Secretary the Chamber of Commerce, Brownwood, Texas.—It is now Tuesday afternoon, and I have not received copy for week of August 5. This usually reaches me Sunday morning, affording me an opportunity of going through it, with all the satisfaction such perusal invariably gives, on Sunday afternoon, which I do without any pricks of conscience at, or fear of laying myself open to, accusation of the perusal of profane literature on the sacred day.

I am not afraid of perusing, any day of the week, trade literature inspired by the principles laid down in the original Ten Commandments. I notice with surprise and amazement that, at times, the galled jade wince here and there, but I have yet to find the MANUFACTURERS RECORD wrong on any matter where principle is involved, and your articles appear to appeal to a great number of men in this country of ours, for which the good Lord be praised. It indicates that not all the citizens of America are bound to the chariot wheels of party, regardless of principle or error, and that this class of thinking men is increasing under the unfolding of right principle as laid down by the MANUFACTURERS RECORD and some other good publications.

If I felt myself at variance with the MANUFACTURERS RECORD on any matter of principle, and felt the urge to take exception to such matter in writing, I would only do so after a full season of fasting and prayer, and with the misgiving, even after that preparation, that I had better get busy and provide the sackcloth and ashes that would surely be my portion when the dust of battle had cleared away.

Would that we had a similar publication to your own under the title of "The Consumers Record."

Striking Longshoremen Return to Work and Begin Negotiations With Their Former Employers for Increased Wage.

New York, N. Y., August 21.—[Special].—After five months of idleness, coastwise longshoremen have returned to work here, and are negotiating with their companies for the increased wages for which they struck. An interesting phase of the strike was the refusal of union truckmen to move freight handled by strike-breakers, which resulted in the formation of a Citizens' Transportation Committee. This committee successfully defeated the efforts of the union truckmen to tie up the port.

The strike, which resulted when leaders of the longshoremen were told by officials of the steamship companies that increased wages were financially impossible at the time, cost New York millions of dollars, and was felt by every buyer of food in the city. When the coastwise steamships ceased to bring in their great food cargoes from the South prices immediately rose, and remained high.

It is estimated that about 20,000 men were out, and figuring their wages at \$5 a day, which is a low estimate, they lost \$1,500,000 in the five months. It is estimated that the public suffered to the extent of \$1,000,000 a day during the strike, making its loss something like \$150,000,000. No attempt has been made to figure the losses of food producers and other shippers, nor to merchants whose businesses were upset by the tie-up of transportation.

One of the five coastwise companies withdrew from the trade during the difficulty, and has placed all its vessels in European business.

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

Automobiles—Coal.

G. TANTI-BELLOTTI, Malta (Mediterranean).—I shall now be pleased if you could induce some manufacturers of cheapest motor cars (Berlin, Sedan, etc.), not yet represented here, to make me offers. I also desire to find an American coal company willing to open in Malta through me.

Saws, Stump Pullers, Etc.

DE LACOUR ET FABRE, 19 Rue D'Aumale, Paris (IXe), France.—We are seeking exclusive representation for France, Belgium, their colonies, and, if possible, Continental Europe, for all apparatus pertaining to the wood industry: portable and semi-fixed saws for working in forests, stump pullers and all kinds of woodworking apparatus, saws of all kinds, planers, etc. Correspondence in French suggested.

Ready-Made Houses.

V. K. RANADE, Post Box 475, Angre's Wadi, Cirgaum, Bombay, India. I have to request some names of firms who manufacture portable, ready-made cottage houses for the middle class people. In my opinion, in India there is a great field for such, if they are found to be moderate in prices as compared with those which are built of stone and lime, etc. Desire complete literature, showing plans, etc., and also export terms.

Machine Tools and Related Articles.

DITTA M. FABRY, Via Nizza 43, Turin, Italy.—We desire to enter into business relations with first-class American manufacturers who are disposed to grant us exclusive selling rights for their products in Italy. The articles that particularly interest us—in which we are specialized—are machine tools, tools and instruments of high precision, scientific instruments and apparatus, etc. We can buy for our own account.

Automobiles, Wood, Hardware.

CARUANA FRERES, Siege Social, Bousse, Et Unis.—We are interested in automobiles, trucks, tractors, tires, wood of all kinds, hardware, automobile accessories, etc. We are agents for North Africa of the following American houses: The John N. Willy Export Co. of Toledo, Ohio; Allis-Chalmers Manufacturing Co. of Milwaukee, Wis.; Fisk Rubber Co. of Chicopee Falls, Mass.; Champion Spark Plug Co. of Toledo, Ohio; etc. Correspondence in French suggested.

Americans to Build Oil Pipe Line and Refinery in France.

A contract has been awarded to James Stewart & Co., Inc., 30 Church street, New York, to build an oil pipe line in France. It will be 132 miles long from Havre to Paris, and will be 10 inches in diameter. The contract was let by the Atlantic, Gulf & West Indies Steamship Lines, which with Du Pont, Furland & Co. bankers, of Paris, will finance the work. The pipe line will be operated by the Compagnie Francaise de Transport des Mazouts et Petroles. It is stated that the general manager of the latter will be S. A. Megath, formerly president of the Galena Signal Oil Co. The pipe line will have a capacity of from 25,000 to 50,000 barrels of oil daily, and the product will be conveyed to Havre from Mexico by Atlantic, Gulf & West Indies steamers.

It is further stated that the construction of the pipe line will be done under a concession granted by the French Government, and it is estimated that the cost of the entire project will be about \$10,000,000. In connection with the pipe line a refinery with a capacity of 25,000 barrels a day (another report says 50,000) will be built and operated at Paris, with the expectation that its capacity will be increased from time to time as business grows. Besides the refinery there will be storage capacity at Paris for 500,000 barrels of oil, while a large group of tanks will be established at Havre, each holding 200,000 barrels. Construction is to begin immediately, and the work is expected to be ready for operation by next July. The steamship company is having built a number of tank steamers to carry its oil across the ocean; there will be 14 of them.

In connection with the announcement of the award of contract it is reported that there will also be organized a refining company and a sales company to market the refined oil.

Construction Department

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS' RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

N. C., Sylva.—Tuckasegee & Southeastern Ry. Co., Jas. E. Walker, Roanoke, Va.; erect 2 bridges across Tuckasegee River; 175 ft. long; wooden. (See Machinery Wanted—Cars.)

N. C., Winston-Salem.—North Carolina State Highway Comsn., Div. Office, Greensboro, N. C.; construct bridges and culverts in Forsyth County; 5 structures under 20 ft. span; 40,550 lbs. reinforcing steel; bids opened Aug. 25; W. S. Fallis, State Highway Engr., Raleigh, N. C. (See Machinery Wanted—Bridge Construction.)

Tex., Cleburne.—Johnson County Commrs., Claude White, Auditor; erect 18-ft. steel bridge across Nolan River; two 70-ft. spans on concrete pier and abutments; bids until Aug. 31; Whiteaker & Washington, County Engrs. (See Machinery Wanted—Bridge Construction.)

W. Va., Moundsville.—Marshall County Commissioners J. E. Chase, Clk.; erect 25-ft. span bridge over Hogg Run; 25-ft. span bridge over Fish Run; both in Clay Dist.; 33-ft. span bridge over forks of Grave Creek in Cameron Dist.; 100-ft. span or two 70-ft. span bridges over Fish Creek in Liberty Dist.; bids until Sept. 3. (See Machinery Wanted—Bridge Construction.)

Canning and Packing Plants.

Ark., Pine Bluff.—Henry Marx, Pine Bluff; Simon Marx, Ignaz Reuther; both Chicago; form \$50,000 company; build meat-packing plant.

S. C., Beaufort.—Seacoast Packing Co. organized; erect plant; 3 stories; reinforced concrete; install equipment; Brooks Engineering Co., Gen. Contr., Moultrie, Ga. (Lately noted inceptd., capital \$150,000.)

Tenn., Knoxville.—East Tennessee Packing Co., Jas. B. Madden, Prest.; erect abattoir and cold storage; reinforced concrete and steel; construction by owner; Henschen & McLenn, Architects, Chicago. (Lately noted increased capital to \$200,000.)

Tex., Franklin.—Quarto Curing & Canning Co. inceptd.; capital \$18,000; E. E. Thomas, R. C. Kendrick, L. W. Helm.

Tex., Houston.—Houston Seafood Co. incorporated; capital \$50,000; R. L. Terry, J. B. Theall, L. B. Roberts.

Clayworking Plants.

Ky., Madisonville.—Bricks.—Spencer Melton and J. M. Reynolds; form company; erect \$25,000 brick plant.

N. C., Norwood.—Bricks.—Carolina Shale Brick Co., H. M. Morson, Gen. Mgr., Char-

lotte, N. C.; rebuild burned brick plant; electric power; \$55,000 to \$60,000.

S. C., Dixiana.—Bricks.—Palmetto Brick Co. organized; G. E. Lafaye, Prest.; J. W. Ruth-erford, Secy.; erect 50,000 daily capacity brick plant.

S. C., Littleton.—Tiling.—Richland Shale Products Co., P. H. Haultwanger, Prest., Columbia, S. C.; increased capital from \$75,000 to \$100,000; constructing 9 kilns; monthly capacity 200,000 hollow building tiles. (Lately noted erect tile plant.)

W. Va., Chester.—Porcelain.—Davidson Porcelain Co. inceptd.; capital \$100,000; W. W. Ingram, W. E. Gillis; both Chester; C. C. Davidson, East Liverpool, O.

Coal Mines and Coke Ovens.

Ala., Anniston.—Blackburn Mining Co. incorporated; capital \$25,000; S. W. Blackburn.

Ala., Birmingham.—Parkwood Cahaba Coal Co. inceptd.; capital \$5000; Charles F. Wheelock, Prest.; Lucy L. Skelton, V.-P.; I. N. Skelton, Secy.-Treas.

Ky., Arjay.—Gooch Coal Co. inceptd.; capital \$10,000; O. M. Gooch, W. J. Stone, G. D. Ware.

Ky., Ashland.—Burns Coal Co. inceptd.; capital \$5000; J. C. Burns, Edward Holley, W. W. Stevenson.

Kentucky.—Kentucky Land Co. inceptd.; capital \$50,000; John Bornan, W. E. Deegan, both Huntington, W. Va.; S. D. Frantz, Mullens, W. Va.

Ky., Blackey.—Elk Creek Coal Co., Knoxville, Tenn., organized; Arthur Groves, Prest.; T. A. Wright, V.-P.; W. J. Everett, Secy.-Treas.; L. J. Madden, Mgr.; develop 1500 acres; daily output 1000 tons. (Lately noted inceptd., capital \$100,000.)

Ky., Hyup.—Hyup Coal Co., Williamsburg, Ky., organized; capital \$5000; H. C. Gillis Prest.; J. B. Snyder, V.-P.; B. B. Snyder, Secy.-Treas.; L. E. Bryant, Mgr.; develop 135 acres; install machinery; daily output 3 cars; J. B. Snyder, Const. Engr. (See Machinery Wanted—Mining Machinery.)

Ky., Pikeville.—Trivette-Elkhorn Coal Co. inceptd.; capital \$75,000; Linton Trivette, J. G. Gilley, W. G. Andrews; erect coal tippie.

Ky., Pine Creek.—Dye Coal Co.; construct coal tippie.

Ky., Prestonburg.—Martha Leslie Coal Co.; increased capital from \$10,000 to \$25,000; erect coal tippie.

Ky., Defiance.—Defiance Coal Co.; construct coal tippie, school, etc.

Ky., Regina.—Ford-Elkhorn Coal Co.; construct coal tippie, houses, school, etc.

Ky., Stone.—Blackburn Coal Co.; construct coal tippie, store, houses, etc.

Md., Mount Savage.—Potomac & Cumberland Coal Co., Philadelphia, Pa.; A. E. Thomas, Gen. Mgr. and V.-P., Frostburg, Md.; develop coal lands.

Okla., Henryetta.—Sun Coal Co. inceptd.; capital \$61,000; I. W. Dopkin, F. D. Reesor, both Henryetta; John R. Grigg, Joplin, Mo.

Okla., Tulsa.—Albert Coal Mining Co. incorporated; capital \$50,000; J. Albert, A. Abend, A. Brodsky.

Tenn., Knoxville.—Shaw Coal Mining Co. inceptd.; J. T. Shaw, Lewis Tillman, G. E. Maloney.

Va., Coeburn.—Mill Creek Mining & Fuel Co. inceptd.; capital \$25,000; W. F. Horne, Prest., Coeburn; H. I. Horne, Secy., Tacoma, Va.; V. F. Bond, St. Paul, Va.

Va., Norfolk.—Coal & Oil Corp. chartered; capital \$100,000; Meyer Rosenthal, Prest., New York; J. R. Routten, Secy., Norfolk.

W. Va., Altman.—Pinnacle Block Coal Co. organized; Henry P. Adams, Prest., Lynchburg, Va.; develop 3000 acres; daily output 2000 tons; install mchry. (Lately noted incorporated, capital \$1,000,000.)

W. Va., Barnum.—Warnock Coal Co. inceptd.; Harley S. Bray, Prest.; D. C. Warnock, Secy.; Harley L. Warnock, Treas.; develop 200 acres; install fan equipment in 2 mines; purchased; daily capacity 300 tons.

W. Va., Charleston.—Grosvenor Coal Sale Co. inceptd.; capital \$25,000; H. C. Jones, A. P. Kilburn, J. G. Pettitt.

W. Va., Charleston.—Fair Seam Coal Co. inceptd.; capital \$100,000; W. S. Johnson, A. M. Belcher; both Charleston; J. F. Davis, Montgomery, W. Va.

W. Va., Clarksburg.—Apex Coal Co. organized; C. A. Butcher, Prest.-Gen. Mgr.; John B. Hefner, V. P.; P. M. Ireland, Secy.-Treas.; develop 53 acres; daily output 250 tons. (Lately noted inceptd., capital \$50,000.)

W. Va., Clay County.—Stottlemeyer Coal Co., Gassaway, W. Va., inceptd.; capital \$50,000; Sheridan and Rutherford Stottlemeyer, Mountain Lake, Md.; Lester M. Adams, Vindex, Md.

W. Va., Harrison County.—Big Four Coal Co. organized; capital \$250,000; Harry B. Clark, Howard R. Stevens, Thos. F. Robey; all Fairmont, W. Va.; develop 250 acres; operate drift mine. (Supersedes recent item.)

W. Va., Logan County.—Big Eagle Mining Co. inceptd.; capital \$400,000; Paul Hiner, Herbert Fitzpatrick, D. W. Brown; all Huntington, W. Va.

W. Va., Iaeger.—Wilmore Pocahontas Coal Co. (lately noted inceptd., capital \$50,000) organized; L. O. McLenn, Prest.-Mgr.; Walter F. Patterson, Jr., V.-P.; Stewart Bethea, Secy.; A. W. McLenn, Treas.; develop 500 acres; G. J. Cooper, Const. Engr., Welch, W. Va. (See Machinery Wanted—Cars; Rails; Tramway.)

W. Va., McDowell and Mingo Counties.—Howard Eavenson, Pittsburgh, Pa.; D. J. F.

Strother, Welch, W. Va.; purchased 30,000 acres coal land; develop.

W. Va., Meadow Bridge.—Gra-vine Coal Co. organized; capital \$50,000; J. W. Graham, Pres.; W. A. Charlton, V. P.; O. P. Vines, Secy.-Treas.; all Hinton, W. Va.

W. Va., Shinnstown.—Stone & Scott Coal Co. No. 2 inceptd.; capital \$500; T. M. Scott, Chas. Arthur, Victor E. Barbe.

W. Va., Shinnston.—Basin Coal Co. inceptd.; capital \$300,000; Phillip P. Steptoe, Louis A. Johnson; both Clarksburg, W. Va.; F. O. Dewar, Fayette City, Pa.

W. Va., Upshur County.—Cobb Coal Co. incorporated; capital \$50,000; William H. and Laone H. Cobb, Samuel T. Spear, all Elkins, W. Va.

Cotton Compresses and Gins.

Ala., Cuba.—Cuba Gin & Mfg. Co. inceptd.; capital \$10,000; J. B. Ennis.

Ala., Florence.—Florence Gin Co. chartered; capital \$14,000; H. S. Wiggins.

Ala., Montgomery.—Attalia Oil & Mfg. Co. inceptd.; capital \$50,000.

Ga., Turin.—Turin Gin & Fertilizer Co. inceptd.; capital \$50,000; Edgar Dominick, R. H. Dominick, J. B. Nixon.

Tex., Barclay.—Barclay Farmers' Gin Co. inceptd.; capital \$10,000; A. M. Ocker, C. J. Raabe, P. A. Pieper.

Tex., Gregory.—Shell & McKenster; rebuild burned cotton gin; loss \$20,000.

Tex., San Benito.—C. S. Reynolds; rebuild burned cotton gin; loss \$87,000.

Electric Plants.

Miss., Louisville.—Town, G. W. E. Bennett, Chk.; purchase electric light and power plant; vote Aug. 31 on \$36,000 bonds.

Mo., Butler.—City, James T. Hull, Mayor; rebuild light and water plants; \$65,000.

Mo., Butler.—City; erect light plant; issue \$65,000 bonds. Address The Mayor.

Mo., St. Louis.—Davis Rankin Junior School, 431 Finney St.; erect power-house addition; Eames & Young, Architects, Arcade Bldg.; Joseph Stewart & Son, Contr., Boatman's Bank Bldg.

Mo., St. Louis.—Swift & Co., Chicago; erect power-plant addition; has plans.

Mo., Wentzville.—City; erect electric-light and power plant; E. T. Archer & Co., Archt., 609 New England Bldg., Kansas City, Mo.

Okla., Erick.—City, J. A. Richardson, Mgr.; extend electric lines; put old lines in alleys with new poles and new wire; transmission system about 1 mi. square; \$20,000 to \$25,000. Lately noted. (See Machinery Wanted—Engine; Wire; Poles.)

S. C., Anderson.—Flat Rock Light & Power Co. inceptd.; capital \$5000; W. L. Hays, Pres.; John T. Howard, V.-P.; W. E. Elrod, Secy.

S. C., Charleston.—Oceanic Power Co. inceptd.; capital \$10,000; Wm. Gregersen, Pres.; J. E. Martin, Jr., V.-P.; Wm. P. Tillinghast, Secy.-Treas.

Tex., Bonham.—Planters' Cotton Oil Co.; increased capital from \$70,000 to \$140,000.

Tex., El Paso.—Southern Baptist Sanatorium, H. F. Vermillion, Supt.; erect power and refrigeration plants.

Tex., Wichita Falls.—Chamber of Commerce, Herbert M. Harrison, Secy.; install street-lighting system; lay 30,245 ft. cable; construct 324 concrete bases and erect 324 lamp standards on Ohio, Indiana, Scott, Lamar, Travis, 7th, 8th, 9th and 10th Sts.; bids until Sept. 1. (See Machinery Wanted—Lighting System.)

Va., Danville.—Riverside & Dan River Cotton Mills, H. R. Fitzgerald, Pres.; construct power plant; Aberthaw Construction Co., Contr., 27 School St.; Lockwood, Green & Co., Archts., 245 State St.; both Boston, Mass.

W. Va., Burnsville.—Burnsville Water & Light Co. inceptd.; capital \$75,000; W. E. Marple, John I. Bender, J. L. Coberly.

Drainage Systems.

Fla., Green Cove Springs.—Clay County Commrs., L. T. Ivory, Clerk; construct drainage system; \$100,000 bonds.

Ky., Carrollton.—City, J. E. Gullion, Mayor; install additional pump and other improvements at light and water plant; vote Nov. 2 on \$12,000 bonds.

Fertilizer Factories.

Ga., Savannah.—Mutual Fertilizer Co.; increase capital from \$50,000 to \$300,000.

Ga., Turin.—Turin Gin & Fertilizer Co. inceptd.; capital \$50,000; Edgar Dominick, R. H. Dominick, J. B. Nixon.

S. C., Anderson.—Anderson Phosphate & Oil Co.; erect sacking plant and warehouse.

S. C., Starr.—Anderson Phosphate & Oil Co.; build sacking plant.

S. C., Seneca.—Anderson Phosphate & Oil Co.; build sacking plant.

Flour, Feed and Meal Mills.

Ark., DeWitt.—Machinery Repairs.—DeWitt Machine Shop (lately noted inceptd., capital \$50,000) organized; B. F. Harshbarger, Mgr.; install 24-in. back-gear drill press and 5 or 6 H. P. gasoline engine. (See Machinery Wanted—Drill Press; Engine.)

Ky., Louisville.—Axles.—Shuler Axle Mfg. Co.; enlarge plant; reported.

Ky., Louisville.—Machinery.—Henry Vogt Machine Co.; erect plant additions; reported.

Tex., Galveston.—Foundry, etc.—Gray's Engineering Works; increased capital from \$700 to \$400,000; purchased Marine Iron Works and International Iron Works; will enlarge plants; add facilities for every class foundry and machine work; H. Gray, Pres.

Tex., Graham.—Graham Mill & Elevator Co.; improve plant; install \$50,000 machinery; purchased.

Tex., Wichita Falls.—Indian Grain Co. inceptd.; capital \$1500; H. L. and M. O. McDowell, R. P. Mathis.

Foundry and Machine Plants.

Ala., Mobile.—Copper, etc.—Mobile Copper Works, Box 1665, organized; has plant; mfr. coils, condensers, retorts, copper and sheet iron work, etc.

Ala., North Birmingham.—Stoves.—Unit Stove Works; improve and enlarge plant.

Ala., Tarrant.—Steel Products, etc.—Ernest Kreher, Pres., Tampa Shipbuilding & Engineering Co., Tampa, Fla.; purchased 40-acre site; erect plant; mfr. steel and iron products, small tractors, etc.

Fla., Tallahassee.—Ice Plants.—Grant-Quick Ice Co. inceptd.; main office, Jacksonville, Fla.; capital \$200,000; mfr. 1 to 10-ton-capacity ice plants. Address care Tallahassee Iron Works.

Ky., Lexington.—Textile Machinery.—Southern Textile Machinery Co., W. P. Paxton; erect 1 and 2-story 200x90-ft. building; G. F. Smith, Archt.

Ky., Winchester.—Tools, etc.—Eureka Tool & Oil Well Supply Co.; rebuild burned plant; loss \$30,000.

Miss., McComb.—Machine Shop.—General Equipment & Welding Co., W. R. Meeder,

Mgr.; erect 40x135-ft. additional machine shop; install machinery.

Mo., St. Louis.—Tools.—Excelsior Tool & Machine Co., 33d and Ridge Sts.; erect 1-story 110x118-ft. foundry addition; F. Ganschieneitz, Contr., 501 N. 15th St.; Stupp Bros. Engineering Co., Structural Engr.

Va., Lynchburg.—Plows.—Standard Plow Co. inceptd.; capital \$400,000; O. H. Smith, Pres.; W. L. Bradley, V.-P.; A. D. Barksdale, Secy.-Treas.

W. Va., Welch.—Armature.—Welch Armature Co.; erect plant; fireproof construction; H. A. Lucas, Contr.; Martin J. Garry, Archt.; both Bluefield, W. Va.

W. Va., Wheeling.—Axles.—Wheeling Axle Co., R. E. Reitz, Gen. Mgr., 27th and Main Sts.; erect foundry; steel construction; install mchy. (Supersedes recent item.)

Gas and Oil Enterprises.

Ky., Hardinsburg.—Breckenridge Oil Co. inceptd.; capital \$25,000; P. W. Roberts, L. T. Haney, Forest K. Rees.

Okla., Oklahoma City.—Gendron Oil Co. inceptd.; capital \$300,000; J. S. Gendron, N. L. Sifers, S. K. Bernstein.

Okla., Henryetta.—Pipe Lines.—Cogswell Refining Co., John P. Cogswell, Pres., Parsons Bldg.; erect fireproof buildings on 12-acre site; install skimming plant; daily output 2000 bbls. petroleum products, including gasoline, kerosene, etc.; construct switch, loading rack and pipe line; J. C. Hertsch, Constr. Engr., 10 Lucern Apartments, Tulsa, Okla. (Supersedes recent item.)

Tex., Paris.—National Oil Service Co. inceptd.; capital \$150,000; J. J. O'Malley, C. B. Brooks, J. G. Coleman.

Va., Norfolk.—Independent Oil Transport Corp. chartered; capital \$500,000; A. Hudson, Pres.; A. T. Barclay, Secy.

W. Va., Lowell.—Lowell Oil Co. inceptd.; Wm. Augenstein, Jr., Lowell; Al Erbacher, Wheeling, W. Va.

Hydro-Electric Plants.

N. C., Charlotte.—Great Mountain Power Co., Trust Bldg., chartered; capital \$2,000,000; H. S. Taylor, M. M. Crandall, G. B. Chapman.

Ice and Cold-Storage Plants.

Fla., Pensacola.—Gulf Coast Fishing Corp., E. L. Miller, Pres.; erect ice and cold-storage plant; daily capacity 60 to 75 tons ice; storage section for company's needs with additional space for meats, furs, etc.; construct wharves and docks for fishing boats. (Lately noted to establish cold-storage plant.)

Ga., Atlanta.—White Provision Co., W. H. White, Jr., Pres.; build \$75,000 plant additions, including cold-storage and freezer building, with 100-ton daily capacity ice plant.

Ga., Commerce.—Commerce Ice Co. organized; J. C. Vernon, Pres.; E. B. Anderson, Secy.-Treas.; erect ice plant; install \$25,000 mchy.; purchased. (Lately noted inceptd., capital \$25,000.)

N. C., Shelby.—Kings Mountain Oil Co.; erect ice plant; daily capacity 10 to 15 tons.

Tex., El Paso.—Southern Baptist Sanatorium, H. F. Vermillion, Supt.; erect refrigeration and power plants.

Tex., Graham.—Graham Mill & Elevator Co., S. R. Crawford, Pres., Dallas, Tex.; expend \$50,000 on plant additions; increased daily capacity to 60,000 lbs. ice.

Tex., Van Alstyne.—Home Ice & Mfg. Co., C. B. Dorchester, Pres., Sherman, Tex.; rebuild burned plant; loss \$20,000.

Iron and Steel Plants.

Ky., Louisville—Iron Furnaces and Rolling Mills.—Ewald Iron Co., R. Baylor Hickman, Prest.; build \$3,000,000 plant to succeed present works; steel fireproof buildings; install iron furnaces and rolling mills; annual capacity 50,000 tons refined charcoal bloom-hammered iron for locomotive construction; present plant has 4 mills with annual output 12,000 tons; new works to have 8 mills, each twice capacity of present mills; H. E. Pierce, Gen. Mgr.

Land Developments.

Ala., Calvert.—Alabama Sugar Cane Co. incorporated; capital \$10,000; Irvin C. McRae, A. Brams, Willis Johnson.

Tex., Belton.—City; extend park facilities; voted \$25,000 bonds. Address The Mayor. (Lately noted to vote.)

Va., Lynchburg.—Virginia Orchards Corp. chartered; capital \$50,000; Jas. L. Martin, Prest.; L. E. Semmes, Secy.

Va., The Hollow.—Long Branch Orchard Co. inceptd.; capital \$25,000; Joseph R. Pedigo, Prest.; N. M. Pedigo, Secy.

Lumber Manufacturing.

Ala., Fairfield.—Fairfield Lumber & Coal Co., P. W. Coll, Mgr.; rebuild burned dry-kiln.

Ala., Bessemer.—Coston-Riles Lumber Co. inceptd.; capital \$100,000; I. M. Riles, W. L. Coston, T. C. Donald.

Ala., Mobile.—C. A. Biles Lumber Co. incorporated; capital \$10,000; C. A. Biles, Prest.; Robert McDonald, V.-P.-Treas.; C. V. Gilbert, Secy.

Ark., Hopefield.—Monarch Lumber Co. organized; A. S. Chave, Prest.; George W. Neal, V.-P.; R. T. Bugg, Secy.-Treas.; all 118 N. Front St., Memphis, Tenn.; has plant; daily output 30,000 to 40,000 ft. hardwood logs. (Lately noted inceptd., capital \$25,000.)

Fla., Kissimmee.—Kissimmee Valley Lumber Co., A. J. Conrad, Secy.; erect 3 mills; daily capacity 35,000 ft.

Ky., Perryville.—Powell-Paxton Lumber Co. inceptd.; capital \$100,000; C. E. Paxton, C. E. Powell, E. J. Ford.

Tenn., Knoxville.—Galyon-Crumley Lumber Co. inceptd.; capital \$50,000; Eugene Galyon, Howell J. Davis, W. F. Loftin.

Tenn., Polk County.—Copper City Lumber Co. inceptd.; capital \$25,000; M. C. King, C. S. Allen, H. A. Orr; all Nashville, Tenn.

Tex., Breckenridge.—City Planing & Lumber Co. inceptd.; capital \$9000; A. E. Butler, J. A. Harley, Clyde Straw.

Va., Winchester.—C. P. Amory & Co. inceptd.; capital \$10,000; C. P. Amory, Prest.; M. S. Amory, Secy.; L. E. Fries, E. V. Fries.

Metal-Working Plants.

Ala., Birmingham.—Metallic Caskets.—Birmingham Metallic Casket Co. inceptd.; capital \$100,000; N. P. Cannon, Prest.; Joseph T. Collins, Jr., V.-P.; John W. Cannon, Secy.-Treas.

Ky., Covington.—Sheel Metal.—Probert Sheet Metal Co., main office Cincinnati, Ohio, organized; capital \$50,000; J. B. Heizer, Prest.; J. A. Downard, V.-P.; O. J. Carpenter, Secy.; E. R. Probert, Treas.-Mgr.; erect 40x140-ft. metal-clad building, \$3000; construction by owner; install sheet-metal and woodworking mchy., \$10,000; purchased; mfr. fireproof doors, window and architectural sheet-metal work, metal garages, etc. (See Machinery Wanted—Metals; Lumber.)

Md., Baltimore.—Cans.—Metal Package Co.,

New York; leased John Boyle Co. and John Boyle Can Co., foot of Thames St.; enlarge plant; install additional mchy.; purchased; mfr. tin cans.

Mo., St. Louis.—Enamel Products.—Superior Enamel Products Co. organized; H. W. Meyer, Prest.; F. G. Jaeger, V.-P. and Gen. Mgr.; A. A. Schmittgen, Secy.-Treas.; erect \$50,000 plant; leased 160x125-ft. site; Wedemeyer & Nelson, Archts.

Tenn., Knoxville.—Auto Rims, etc.—C. F. Christopher, J. M. Shook; organize company; erect \$300,000 plant; install mchy.; mfr. collapsible auto rims, non-kickable cranks, folding dinner pails, computing machines, etc.

W. Va., Huntington.—Metal Signs, etc.—Meek-Dennison Mfg. Co. inceptd.; capital \$50,000; E. C. Meek, R. C. Dennison, V. G. Bryan; mfr. electric automatic motion signs and fountains.

Mining.

Tennessee—Rock.—Tennessee Rock Producing Co. inceptd.; capital \$300,000; R. J. and E. N. Funkhouser; both Hagerstown, Md.; Jas. B. Preston, New York.

Tex., Houston.—Crushed Rock.—G. M. Crushed Rock Co. inceptd.; capital \$25,000; S. B. Houx, O. S. Van de Mark, J. E. McMahon.

Va., Henry.—Tale, etc.—Blue Ridge Tale Co., C. O. Kitson, Secy.-Mgr.; develop 300 acres; daily output 40 tons tale and soapstone. Lately noted increased capital to \$150,000. (See Machinery Wanted—Cars; Conveyor.)

Miscellaneous Construction.

La., New Orleans.—Levee.—United States Engr. Office, 519 Canal St.; construct 2,777,000 cu. yds. earthwork in Atchafalaya, Lafourche, Barataria, Pontchartrain and Lake Borgne Levee Dist.; bids until Sept. 8. (See Machinery Wanted—Levee Construction.)

Okla., Snyder.—Granite.—Snyder Granite Quarrying Co. inceptd.; capital \$10,000; C. A. Iglehart, A. M. Miller, J. C. Clapham.

Tex., Manchester.—Wharf.—Mayor Amerman, Houston, Tex.; construct 100x500-ft. wooden wharf and shed; \$300,000; contract let.

Tex., Temple.—Swimming Pool, etc.—Santa Fe R. R. and City Young Men's Christian Assn., W. K. Wingfield, Secy.; enlarge gymnasium; construct swimming pool; reinforced concrete and white tile finish; erect 20 dormitory-rooms; \$35,000; J. H. Davis Contr. Previously noted to build pool. (See Machinery Wanted—Filtration Plant.)

Miscellaneous Enterprises.

Ala., Birmingham.—Electrical and Automobile Supplies.—Interstate Electrical Co. of Alabama inceptd.; capital \$350,000; Percival Stern, Prest.; F. K. Levy, V.-P.; C. L. McBride, Secy.-Treas.; S. V. Allmont, Gen. Mgr.

Ala., Birmingham.—Farm Lighting.—Alabama Willys Light Co. inceptd.; capital \$40,000; Ned Morton, Prest.; A. G. Morton, V.-P.; Clyde H. Wade, Secy.-Treas.

Ala., Mobile.—Building Materials.—Doody Sand & Gravel Co. inceptd.; capital \$24,000; Wm. J. Norville, Jas. W. Doody, J. C. Baker.

Fla., Jacksonville.—Engineering.—General Engineering Co. inceptd.; capital \$10,000; W. C. Johnson, Prest.; Claude Smith, V.-P.; E. T. Melvaine, Secy.-Treas.

Fla., Pensacola.—Publishing.—Navigator Publishing Co. inceptd.; capital \$10,000; R. B. Moon, Prest., Cincinnati, O.; R. S. Hendon, Secy.-Treas., Pensacola.

Fla., Wauchula.—Farmers' Supplies.—Wauchula Farmers' Supply Co. inceptd.; capital

\$10,000; E. F. Bostick, Prest.; H. H. Petteway, V.-P.; W. E. McEwen, Secy.-Treas.

Ky., Ashland.—Plastering, etc.—Ashland Stucco Co. inceptd.; capital \$1500; L. E. Payne, J. L. Fearing, H. Preston.

Ky., Pikeville.—Publishing.—Cumberland Publishing Co. inceptd.; capital \$20,000; J. L. McCoy, W. W. Gray, James A. Scott.

La., Monroe.—Cleaning, Dyeing, etc.—J. C. Liner Tailoring, Cleaning & Dyeing Co.; J. C. Liner, Prest.; Peyton Parker, Secy.-Treas.; erect \$112,000 building; install mchy.; \$10,000 to \$15,000; purchased; J. W. Smith, Archt.

La., Shreveport.—Fire-alarm System.—City; construct fire-alarm system; vote Sept. 14 on \$25,000 bonds. Address The Mayor.

Miss., Gulfport.—Steamship Line.—Gulfport Fruit & Steamship Co. inceptd.; capital \$100,000; Joseph Van Cooster, J. H. Lang, John C. Simpson.

Mo., Holden.—Eggs and Poultry.—Missouri Egg & Poultry Co.; rebuild burned plant; loss \$50,000.

N. C., Winston-Salem.—Boiler-house.—R. J. Reynolds Tobacco Co.; erect 1-story 25x38-ft. boiler-house; A. M. Walkup & Co., Contrs., 746 17th St.

Tex., Dallas.—Construction.—A. H. Wicker & Co. inceptd.; capital \$100,000; A. H. Wicker, R. E. Orr, F. S. Webster.

Tex., Linden.—Potato Curing.—Linden Curing & Storage Co. inceptd.; capital \$10,000; J. C. Fant, A. S. Cates, I. E. Lanier.

Tex., Matador.—Publishing.—Motley County Publishing Co. inceptd.; capital \$125; Jack Luckett, W. D. Starcher, W. E. Hamilton.

Tex., Waco.—Publishing.—Fields-Gayle-Jones Co. inceptd.; capital \$18,000; Chester Fields, Gibson Gayle, F. B. Jones.

Tex., Wichita Falls.—Electrified Water.—Electrified Water Co. inceptd.; capital \$30,000; Bernard Goodman, O. T. Hill, J. E. Blaine.

Va., Norfolk.—Ship Chandlery.—E. J. Taylor & Co. inceptd.; capital \$100,000; E. J. Taylor, Prest.; C. H. Peebles, Secy.

Va., Onancock.—Printing.—Accomac News Co. inceptd.; capital \$15,000; Spencer F. Rogers, Prest.; John T. Bornum, Secy.; both Onancock; G. Walter Mapp, Accomac, Va.

Miscellaneous Factories.

Ala., Sheffield.—Ice Cream.—Sidebottom Ice Cream Co. inceptd.; capital \$25,000; W. W. Grizzard, Prest.; W. M. Sidebottom, Secy.-Treas.; J. R. Pugh, Supt.-Gen. Mgr.; has plant; install 20-ton refrigeration system with ice-making tank, cold-storage rooms, etc.

Fla., Dade City.—Cane Syrup.—Florida Cane Syrup Co. organized; capital \$250,000; E. S. Slough, Prest.; Dade City; C. J. Cooper, V.-P., Eau Claire, Wis.; Frank S. Cooper, Secy., Tampa; grow sugar cane on 1000 acres; build syrup mill.

Ga., Atlanta.—Paints.—Atlanta Paint Co.; increased capital from \$20,000 to \$50,000.

Ga., Griffin.—Paper Boxes.—Charles G. Mills; erect paper-box factory; install mchy.; purchased.

Ga., Macon.—Cake, Flour.—Bak-A-Cake Mfg. Co. organized; capital \$35,000; has plant; install mchy.; purchased; present daily output 500 cases; later increase to 1500 cases. (Lately noted inceptd., capital \$20,000.)

La., Hancock.—Carbon.—Monroe-Louisiana Carbon Co. organized; Edmund C. Beckman, Prest.; J. C. Carr, Secy.-Treas.; both St. Louis, Mo.; Barney Oakland, Supt., Deslard and 3d Sts., Monroe, La.; construct \$1,000,000 plant for carbon mchy.; 13 units; daily capacity 24,000,000 to 26,000,000 cu. ft.; erect colony houses; drill 1000-ft. water well; build

electric-light and power plant, drainage system, etc.; Major Chauncey Matlock, Consol. Engr., New York.

Ga., Savannah—Pepsi-Cola.—Pepsi-Cola Co., New Bern, N. C.; erect factory; install mch.; \$500,000.

Ky., Louisville—Candy.—National Candy Co., Frank A. Menne, Mgr.; purchased 200x200-ft. site; erect 5-story-and-basement factory; \$1,000,000; mfr. candies.

Md., Baltimore—Remedies.—Consolidated Remedy Corp., 205 Keyser Bldg., Incptd.; capital \$500,000; Wm. C. Ludwig, Roy V. Tydings, Chas. F. Lee.

La., Bogalusa—Essential Oils.—Essential Oil Specialty Co., Grassland, Pa.; Gustave C. Mahlek, 1324 S. 57th St., Philadelphia, Pa., and R. H. Adams, Woolworth Bldg., New York, interested; reported to build \$1,000,000 plant mfg. essential oils from stumps and light woods; obtain raw materials from Great Southern Lumber Co. (Lately noted to build large plant.)

La., New Orleans—Pepsi-Cola.—Pepsi-Cola Co., New Bern, N. C.; erect factory; install mch.; \$500,000.

Md., Baltimore—Coca-Cola.—Coca-Cola Co., Baltimore and Atlanta; S. L. Willard, Res. Mgr., Market Pl. and Pratt St.; erect \$1,000,000 manufacturing plant; 4-story 530x230-ft. reinforced concrete building with brick curtain walls; 155,000 sq. ft. floor space on ground floor; equip for daily capacity 50,000 gals; succeed present 20,000-gal. plant; also build coopeage for barrels; Arthur Tufts Co., Louis Wilcox, Representative, Archt.-Engr.-Contr. (Lately noted buying site for factory.)

Mo., Kansas City—Bakery.—Smith Baking Co., 18th and Cherry Sts.; 1½-story and basement, 100x150-ft. bakery; Geo. H. Sledhoff Construction Co., Contr., Wichita, Kans.; P. H. Anthony, Archt., Kansas City.

Mo., St. Louis—Hats.—Haas-Crown Hat Mfg. Co.; purchased 3-story-and-basement factory building; 20,000 sq. ft. floor space; mfr. ladies' hats.

N. C., Greensboro—Chemicals.—Southern Carbonic Co. Incptd.; capital \$125,000; J. B. Harrison, J. Frank Harrison, F. P. Hobgood.

N. C., Hendersonville—Mattresses.—H. B. Croxton, Dillon, S. C.; plans factory.

N. C., Lenoir—Tannery.—Caldwell Tanning Co., Box 554 (lately noted Incptd., capital \$125,000), organized; R. F. Thornburg, Prest.; T. H. Brayhill, V.-P.; Joe Powell, Secy.-Treas. and Mgr.; has plant. (See Machinery Wanted—Hides; Greases; Tanning Extracts.)

Okla., Enid—Incubators.—Fireless Incubator Mfg. Co. chartered; capital \$100,000; Mrs. Adnah I. Isbell.

Tenn., Memphis—Medicine.—Herb Juice Medicine Co.; increase capital from \$75,000 to \$200,000; erect plant; install machinery.

Tenn., Memphis—Ice Cream, etc.—Clover Farm Dairy Co.; increased capital from \$100,000 to \$350,000; expend \$250,000 on plant additions; erect building; mfr. ice cream.

Tex., Corsicana—Mattresses.—Chanway Mattress Co., C. W. Rogers, Prest., Dallas, Tex.; purchased building; improve; install \$30,000 mch.

Tex., Dallas—Feed.—American Oil Cake & Feed Co. Incptd.; capital \$10,000; Carl Eichenberg, H. W. Denbo, Franz Weissmann.

Tex., El Paso—Lime.—Atlas Brick Co., C. L. North, Prest., Dallas and Cotton Sts.; erect lime-hydrating plant; \$60,000.

Tex., Fort Worth—Acid.—Fort Worth Acid Works Incptd.; capital \$37,500; E. P. Dillman, A. G. Wright, J. C. Reed.

Va., Hopewell—Pulp and Paper.—Hummel-Ross Fiber Corp. organized; capital \$5,000,000; Vice-President, Thos. W. Ross of Hummel & Downing Co., Milwaukee, Wis.; writes to Manufacturers Record: Purchased 75 acres land, several buildings and equipment; moving and re-erecting buildings and adding other structures; all contracts let; install mch. to mfr. sulphate wood pulp and paper; general manager and engineer at Hopewell, Jas. Beveridge of Chatham, New Brunswick, Canada. (Lately noted chartered to mfr. wood pulp, paper, etc.)

Va., Lynchburg—Fiber-board Boxes.—J. R. Clark, Mgr. J. R. Clark Co., 810 People's Bank Bldg.; plans mfr. fiber-board packing boxes. (See Machinery Wanted—Fiber Board.)

Va., Richmond—Bottling.—United Doctors. M. Rosenberg; erect 2-story 20x40-ft. bottling plant; B. J. Rowlett, Archt., Old Dominion Trust Bldg.

Va., Richmond—Tobacco.—Larus & Bros., T. Reed, Prest., 2021 E. Main St.; erect 5-story 88x176-ft. factory; John T. Wilson, Contr., Mutual Bldg.; Carneal & Johnson, Archts., Chamber of Commerce Bldg.

Va., Richmond—Corrugated Paper.—Richmond Corrugated Paper Co., B. W. Wilson, Prest.; erect 1-story addition; H. T. Barnham, Archt., Chamber of Commerce Bldg.

W. Va., Nitro—Glass Caskets.—Crystal Glass Casket Co., Edwin Reed, Secy.-Treas., Muskogee, Okla.; acquired 4 fireproof buildings; use for annealing and trimming processes in casket mfr. and storage; later erect other buildings.

Motor Cars, Garages, Tires, Etc.

Ala., Andalusia—Garage.—Sessions-Darling Motor Co., A. C. Darling, Prest.; erect garage and sales station; 2 stories; 79x100 ft.; brick; N. L. Goin, Archt., Gainesville, Fla. (Lately noted.)

Fla., Oldsmar—Tractors.—Oldsmar Tractor Co., H. J. Keller, V.-P. and Mgr.; increased capital from \$100,000 to \$500,000; has 80-acre site; erect \$50,000 machine plant; construct foundry; increase annual output from 2000 to 10,000 tractors.

Ky., Covington—Automobiles.—Covington Buick Co. Incptd., capital \$40,000; Harry W. Ware, N. J. Kilpatrick, J. Clifford Ware.

Ky., Lexington—Service Station.—Consumers' Service Station, 3d and Limestone Sts.; erect \$10,000 service station.

Ky., Louisville—Tires.—Cumberland Tire & Rubber Co. Incptd.; capital \$3,000,000; Samuel S. Dant, Louisville; F. W. O'Brien, Elyria, O.; A. L. Henry, Indianapolis, Ind.

La., New Orleans—Filling Station.—Gulf Refining Co.; erect oil filling station; purchased \$34,000 site.

Md., Baltimore—Tires.—Delion Tire & Rubber Co., John W. Price, Prest., 131 W. Mt. Royal Ave.; purchased plant and equipment of Dreadnaught Tire & Rubber Co.; plans alterations and improvements; install new machinery; daily capacity 500 tires and 1000 tubes.

Mo., St. Louis—Garage.—Roy Selden Price, Arcade Bldg.; preparing plans for garage; brick.

Mo., St. Louis—Automobiles.—Lilley Motor Co., care of Butler Motor Co., 26th and Walnut Sts.; erect motor sales building; L-shape, 1 story and basement; 60x130 and 40x50 ft.; W. B. Weaver, Contr., 304 Commerce Bldg.

Mo., St. Louis—Garage.—T. A. Mulani, New York; erect garage and warehouse addition; 2 stories and basement; 135x92 ft.; Long Construction Co., Contr., 600 Rialto Bldg., Kansas City, Mo.

Tenn., Jellico—Tires and Tubes.—Jellico

Cord Tire Corp. chartered; capital \$1,500,000; J. W. Mart, Prest.-Mgr., Akron, O.; J. A. Hackney, V.-P.; Charles Hughes, Secy.-Treas.; remodel building; fireproof; \$100,000 to \$150,000; install \$100,000 to \$125,000 mch.; Akron Engineering Co., Archt., Akron, O.

Tex., Austin—Automobiles.—Standard Motor Sales Co. Incptd.; capital \$15,000; Sam Sparks, S. A. Philquist, J. A. Belger.

Tex., El Paso—Automobiles.—Franklin Motor Car Co. Incptd.; capital \$10,000; L. J. Trost, L. A. Whitaker, F. E. Sawyer.

Tex., Fort Worth—Automobiles.—Diamond Truck Co. Incptd.; capital \$50,000; M. R. Harris, Temple Harris, J. D. Davis.

Tex., Pittsburg—Garage.—J. T. Webster Motor Co.; occupy 100x100-ft. garage to be erected by F. J. Phillips, Greenville, Tex.

Tex., Rusk—Automobiles.—Rusk Motor Co. Incptd.; capital \$5000; E. R. Gregg, R. L. Hackett, J. I. Perkins, Jr.

Tex., San Antonio—Garage.—J. M. Nix; erect \$7500 garage; tile.

Tex., Stamford—Automobiles.—Starwalt Motor Co. Incptd.; capital \$20,000; A. E. Starwalt, R. A. Moore, A. Sokolski.

Va., Alexandria—Garage.—Remschell Automobile Sales Co., 121 N. Fairfax St.; erect garage; brick; concrete; steel; Mr. Dunn, Archt.

Va., Bristol—Garage.—Holston Garage incorporated; capital \$70,000; H. F. Potts, Prest.; E. W. Potts, Secy.

Va., Roanoke—Repair Shops.—F. N. Hayes Machine & Motor Co., F. N. Hayes, Prest.; erect buildings for machine repair shops.

W. Va., Fairmont—Automobiles.—Newcomer Motor Car Co. Incptd.; capital \$25,000; Harry L. Newcomer, Ben J. Wilson, C. T. Cary.

W. Va., Huntington—Automobiles.—Liberty Sales Co. Incptd.; capital \$200,000; T. C. Thomas, Huntington; Dennis J. Buckley, E. R. Lester; both Springfield, W. Va.

Road and Street Construction.

Fla., Haines City.—City; pave streets; voted \$60,000 bonds. Address The Mayor.

Ga., Moultrie.—City; pave streets; \$250,000; Atlantic Bitulithic Construction Co., Contr., Washington, D. C.

Ga., Rome.—Floyd County Commrs. Roads and Revenues, P. H. Vandiver, Chrmn.; construct 7.3 mi. topsoil surfaced road; portion of Rome-Cedartown highway; Federal-aid Project 151; 17,172.5 cu. yds. surfacing; bridges and culverts; bids until Sept. 17. (See Machinery Wanted—Road Construction.)

Ky., Bardwell.—Carlisle County Commrs.; construct roads; vote in November on bonds. (Supersedes recent item.)

La., Alexandria.—Rapides Parish Police Jury, J. F. Ball, Prest.; grade 16 mi. road from Forest Hill to Hinston; bridges and culverts; bids until Aug. 31; changed date from Aug. 9; Ira W. Sylvester, Engr. (See Machinery Wanted—Road Construction.)

La., Cedar Grove.—Town; pave streets; voted \$25,000 bonds. Address The Mayor.

La., Columbia.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.; construct 13.72 mi. Columbia-Monroe Highway; Section A; Caldwell Parish; bids until Aug. 30; Duncan Buie, State Highway Engr. (See Machinery Wanted—Road Construction.)

La., Rayville.—Highway Dept. Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.; construct with gravel 10.75 mi. Rayville-Monroe Highway; 13.26 mi. Rayville-Winnboro Highway; bridges; Richland Parish; bids until Aug. 30; changed date from

July 19; Duncan Bule, State Highway Engr. (See Machinery Wanted—Road Construction.)

Ky., Louisa.—City; pave 36,000 sq. yds. Main, Madison, Court, Water and other streets; Kentucky rock asphalt on macadamized base; 30,000 lin. ft. concrete curbing and guttering; J. Richmond, Contr.

La., Shreveport.—City Comsn.; resurface paved streets; vote Sept. 14 on \$60,000 bonds; pave Texas Ave., Greenwood and other roads; vote on \$100,000 bonds.

Md., Annapolis.—State Roads Comsn., 601 Garrett Bldg., Baltimore; construct 2.14 mi. State Highway on Mountain road from end of concrete section to Jacobsville; concrete; Anne Arundel County, Contract AA-19; bids until Aug. 31. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—State Roads Comsn., Garrett Bldg.; issued schedule for \$5 mi. highway construction; will invite bids.

Md., Cumberland.—State Roads Comsn., 601 Garrett Bldg., Baltimore; construct 1.4 mi. State Highway on Legislative road between Dorantown and Allegany; concrete; Allegany County, Contract A-18; bids until Aug. 31. (See Machinery Wanted—Road Construction.)

Md., Oakland.—State Roads Comsn., 601 Garrett Bldg., Baltimore; grade and drain 1.99 mi. State highway from Friendsville toward Love; Garrett County, Contract 485; J. M. Cain, Contr., 1024 N. Charles St., Baltimore. (Lately noted inviting bids.)

Md., Towson.—State Roads Comsn., 671 Garrett Bldg., Baltimore; construct 2.04 mi. State Highway at Hereford from York road; concrete; Baltimore County, Contract B-38; bids until Aug. 31. (See Machinery Wanted—Road Construction.)

Md., Rockville.—Montgomery County Commissioners; repair 4 mi. road from Hunting Mill to Travilah; lowest bidder, Geo. B. Mulen, Washington, D. C., at \$40,315.

Miss., Louisburg.—North Carolina State Highway Comsn., Raleigh, N. C.; construct 19.8 mi. State highway in Franklin and Warren counties; 46,310 cu. yds. topsoil surfacing; bids until Sept. 1; W. S. Fallis, State Highway Engr., Raleigh. (See Machinery Wanted—Road Construction.)

Miss., Paulding.—Jasper County Supvrs.; construct roads in Dist. 5; vote Sept. 9 on \$125,000 bonds.

Mo., Albany.—State Highway Dept.; construct 8.86 mi. Jefferson highway; Federal-aid Project 54, Section A; Land Grading Co., Contr., Ballinger Bldg., St. Joseph, Mo.

Mo., Springfield.—Greene County Comms., Galloway Bridge Public Road Dist.; construct and repair roads; vote Sept. 6 on \$14,500 bonds.

Mo., St. Louis.—City, Board Public Works; awarded \$222,865 paving contracts: O. S. Brighton, \$136,722, reconstruct Marcus, Lawton, Lafayette and Union Aves.; Granite Bituminous Paving Co., \$64,093, improve Skinker road and Maple Ave.; city will reconstruct 7th St. at \$22,050. (Lately noted inviting bids.)

Miss., Valden.—Carroll County Highway Comms., Dist. 4; construct 37 mi. roads; Jno. M. Harbert Engineering Co., Engr., Indianapolis, Miss.

N. C., Durham.—Durham County Comms.; construct 4.52 mi. Fish Dam road between Durham and Robinson Grove Church; 10,400 cu. yds. topsoil; bids until Sept. 7; F. E. Schnepfe, County Engr. (See Machinery Wanted—Road Construction.)

N. C., Elizabethtown.—Bladen County Commissioners, W. H. Grimsley, Chrm.; construct 12 mi. sand-clay road; bids opened; W. H. Banck, Engr., Wilmington, N. C. (Supersedes recent item.)

N. C., Nashville.—Board of Aldermen; pave 1 1/4 mi. street; Mees & Mees, Conslt. Engrs, 310 Trust Bldg., Charlotte, N. C.

N. C., Vanceboro.—Town, T. S. Jackson, Mayor; construct 14,000 sq. yds. brick pavement; bids until Sept. 20; R. R. Eagle, Engr., Newbern, N. C. (See Machinery Wanted—Paving.)

N. C., Yanceyville.—North Carolina State Highway Comsn., Div. Office, Greensboro, N. C.; construct 6.68 mi. State highway in Caswell county; 17,650 cu. yds. topsoil surfacing; bids opened Aug. 25; W. S. Fallis, State Highway Engr., Raleigh, N. C. (See Machinery Wanted—Road Construction.)

Okla., Chandler.—City, D. D. Landsaw, Clk.; repave business district; \$150,000; V. V. Long & Co., Conslt. Engrs., 1300 Colcord Bldg., Oklahoma City.

Okla., Oklahoma City.—City Comms.; pave Park Place on 11th and 12th Sts. and Laird Ave.; issue \$62,880 bonds.

Okla., Tulsa.—City Comsn.; pave Division St.; \$25,000; Frye & Son, Contrs.; C. E. Griggs, City Engr.

S. C., Gaffney.—City; pave street to Limestone College. Address The Mayor.

S. C., Union.—Union County Comms., W. B. Deneen; construct 5.327 mi. roadway between Buffalo Mills and Spartanburg county line; South Carolina State Highway Dept., Project No. 92; 16,810.27 cu. yds. topsoil surfacing compacted; 21,853 cu. yds. overhaul on surfacing; bids until Sept. 3; L. M. Weisiger, Div. Engr., Laurens, S. C. (See Machinery Wanted—Road Construction.)

Tenn., Charlotte.—State Dept. Highways, Nashville, Tenn.; construct grading and drainage structures on 9.94 mi. State highway 3 between Cheatham County line and Burns; \$56,479.99; F. H. Crow & Co., Contr., Dickson, Tenn. (Lately noted inviting bids.)

Tenn., Dresden.—State Dept. Highways, Nashville, Tenn.; construct grading and drainage structures on 9.94 mi. State Highway 36, Project 22; Carroll and Weakley counties; \$117,902.36; W. S. Knight & Co., Contrs., Memphis, Tenn. (Lately noted inviting bids.)

Tenn., Shelbyville.—Bedford County Commissioners, M. B. King, Clk.; construct roads; \$200,000 bonds.

Tex., Center.—Shelby County Comms.; grade, gravel-surface and drain 31.9 mi. Highway 8 from San Augustine county line to Panola county line; Smith Bros., Contrs., Crockett, Tex.

Tex., Dallas.—City; construct 59,765 sq. yds. paving; Warrenite-bitulithic pavement on concrete base; Texas Bitulithic Co., Contr., Dallas, Tex.

Tex., Fort Worth.—Tarrant County Commissioners; grade and drain 5.8 mi. Bankhead Highway at Arlington; \$68,967.82; Womack Construction Co., Contr., Sherman, Tex. (Lately noted inviting bids.)

Tenn., Murfreesboro.—State Dept. Highways, Nashville, Tenn.; construct 16.304 mi. State Highway 7, Project 47, from Davidson County line; Rutherford County; bituminous macadam surfacing; \$424,120.82; Boyd Williams, Contr., Lawrenceburg, Tenn. (Lately noted inviting bids.)

Tex., Cleburne.—Johnson County Comms., Claude White, Auditor; construct 16 mi. highway on Rio Vista and Lone Willow roads in Precinct 1; 31,000 cu. yds. gravel surfacing; bids until Aug. 31; Whiteaker & Washington, County Engrs. (See Machinery Wanted—Road Construction.)

Tex., Quitman.—Wood County Comms.; surface 16 mi. Jim Hogg highway; 25,024 cu. yds. gravel; S. D. Davis, Engr.

Tex., Montague.—Montague County Commissioners; grade, surface and drain 4.117 mi. Highway 2-D from Ringold to Red River, 16 ft. wide; J. R. Hill, County Engr., Bowie, Tex.

Tex., San Antonio.—City Comsn.; pave 21 streets; Uvalde rock asphalt and bitulithic, 2-in. pavements on macadam base; \$560,000; contract to Southwestern Bitulithic Co. and Uvalde Co. (Previously noted.)

Tex., San Augustine.—San Augustine County Comms.; grade, surface and drain 8.89 mi. Highway 8, Section B; State-aid Project 75; lowest bidder, H. F. Bland, Center, Tex.

Tex., Texarkana.—City, W. H. James, City Secy.; pave 60,000 yds. on State Line Ave., Pine, Maple, 3d and 7th Sts.; asphaltic concrete on concrete base, brick on concrete and gravel base; bids opened Aug. 23; Otto Yonglin, City Engr. (See Machinery Wanted—Paving.)

Tex., Waxahachie.—City; construct 19,563 sq. yds. paving; Warrenite-bitulithic pavement on concrete; Texas Bitulithic Co., Contr., Dallas, Tex.

W. Va., Charleston.—Kanawha County Comms.; awarded \$271,000 road contracts; construct road from Montgomery to Cabin Creek; Abbott Bros. have contract for Section 4; Towles & Co., Princeton, W. Va., Sections 5 and 6, and Randish Construction Co., Section 8, on Paint Creek. (Lately noted inviting bids.)

W. Va., Smithfield.—Town; improve streets; vote Aug. 21 on \$15,000 bonds. Address The Mayor.

Sewer Construction.

D. C., Washington.—Dist. Comms., Room 509 Dist. Bldg.; construct 1000 lin. ft. concrete sewer; bids until Sept. 7. (See Machinery Wanted—Sewers.)

Ky., Louisiana.—City; construct storm sewers on 3 mi. Main, Madison, Court, Water and other streets; 36,000 sq. yds. paving; J. Richmond, Contr.

La., Cedar Grove.—Town; construct sewer system; voted \$125,000 bonds. Address The Mayor.

La., Shreveport.—City Comsn.; construct storm sewers; vote Sept. 14 on \$100,000 bonds.

Okla., Fairfax.—City, E. C. Quigley, Clk.; construct sewage-disposal plant; \$30,000; V. V. Long & Co., Conslt. Engrs., 1300 Colcord Bldg., Oklahoma City.

Okla., Holdenville.—City will lay 20,000 ft. sewer pipe; Clarence E. Edge, City Engr.

Okla., Lawton.—City, J. C. Talmadge, Commissioner Public Property; complete sewage-disposal plant and pumping station for treating 1,500,000 gals. sewage per day; \$200,000; V. V. Long & Co., Consult. Engrs., 1300 Colcord Bldg., Oklahoma City.

Tex., Belton.—City; extend sewer system; voted \$25,000 bonds. Address The Mayor. (Lately noted to vote.)

Shipbuilding Plants.

Va., Norfolk.—Steamships.—Virginia Iron Works; reported to build drydock and ship-repair plant costing \$5,000,000.

Textile Mills.

Ga., Banning.—Cotton Yarn.—Banning Cotton Mills chartered; Geo. Beveridge, Prest.; A. G. Couch, Secy.-Treas.; both Atlanta; purchased Hutcheson Mfg. Co.

Ky., Paducah.—Hosiery.—Paducah Hosiery Mills Co.; erect 1 story and basement 82x110-ft. plant addition; W. C. MacCready, Archt., 223 City National Bank Bldg.

Tex., Dallas—Hosiery.—Texas Hosiery Mills organized; 1407 S. Ervay St.; establish plant; purchased mch.; daily capacity 800 doz. prs. infants' cotton hosiery.

Tex., Waco—Cotton Cloth.—Miller Cotton Mills; increased capital from \$500,000 to \$1,000,000.

Va., Hopewell—Artificial Silk.—Tubize Artificial Silk Co. of America, Emile Bindschedler, Mgr., care Meigs, Bassett & Slaughter, Chemical Engrs., 1209 Girard Bldg., Philadelphia, Pa.; establish plant; purchased 250 acres land, 350 houses, 7 dormitories; equip these structures; build 600x286-ft. brick and steel mill; install mch. to mfr. artificial silk based on cotton cellulose. This company organized with initial capitalization \$5,000,000 and associated with Tubize Artificial Silk Co., Brussels, Belgium. A. Everarts, Gen. Mgr. of Belgian company, in charge construction. (Supersedes previous items.)

W. Va., Martinsburg—Woolens.—Berkley Woolen Co.; expend \$40,000 on plant improvements; erect 3-story 50-ft. addition; install mch.; increase from 62 looms to 100 looms.

W. Va., Shinnston—Silk.—Ridgie Silk Co., J. H. Nuzum, Prest., Clarksburg, W. Va.; erect \$30,000 building; 2 stories; 50x100 ft.; brick; concrete; construction by day work; install 6000 spindles; purchased \$60,000 mch.; \$6000 electric power plant, 65 H. P.; belt drives; weekly capacity 2000 lbs. thrown silk; Wm. J. Hartman, Engr.-Archit., Shinnston. (Lately noted organized, capital \$150,000.)

Water-Works.

Fla., Miami Beach—City; extend water-works; voted \$50,000 bonds. Address The Mayor.

Ky., Carrollton—City, J. E. Gullion, Mayor; install additional pump and other improvements at water and light plant; vote Nov. 2 on \$12,000 bonds.

Ky., Lawrenceburg—City, J. L. Toll, Mayor; install pressure filtration plant and appurtenances; erect water-works building; bids until Sept. 15; B. S. Griffy, Chrmn. Water Works Comm. (See Machinery Wanted—Water-Works.)

La., Cedar Grove—Town; construct water-works; voted \$125,000 bonds. Address The Mayor.

Miss., Tunica.—Town, W. H. Houston, Mayor; extend water-works; erect 100,000-gal. concrete reservoir; 380 G. P. M. pumping unit (triplex pump and crude oil engine), etc.; bids until Sept. 8; Dabney Engineering Co., Engr., Randolph Bldg., Memphis, Tenn. (See Machinery Wanted—Water-works Construction.)

Mo., Butler—City, James T. Hull, Mayor; rebuild water and light plants; \$65,000.

N. C., Gastonia—City, R. G. Cherry, Mayor; lay 4½ mi. 12-in. and 2 mi. 8, 3½, 6 C. I. water mains; B. F. Roberts, Contr., Gastonia; Wm. M. Platt, Engr., Durham, N. C. (Lately noted inviting bids.)

Okla., Erick—Town, J. A. Richardson, Mgr.; drill or deepen wells; \$8000 to \$10,000; install 200 H. P. or 2-100 H. P. oil engines. Lately noted. (See Machinery Wanted—Generator.)

Okla., Fairfax—City, E. C. Quigley, Clerk; extend water-works; \$50,000; V. V. Long & Co., Consult. Engrs., 1300 Colcord Bldg., Oklahoma City.

Okla., Stigler—City, Geo. Melton, Clerk; extend water-works, including water-purification plant, pumping station and fire equipment; \$35,000; V. V. Long & Co., Consult. Engrs., 1300 Colcord Bldg., Oklahoma City.

Tenn., Pulaski—Board of Aldermen; install chlorinator for water-works.

Tex., Belton—City; extend water-works; voted \$50,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Galveston—City, Geo. E. Robinson, Commr. Water-Works and Sewers; construct reservoir; concrete; 1,750,000 gal. capacity; \$41,914; J. W. Zempter, Contr., Galveston; Henry Exall Elrod Co., Engr., Dallas, Tex. (Lately noted inviting bids.)

Va., Bedford.—Town, A. J. Cauthern, Mayor; improve water-works; erect brick and concrete filter building; \$20,000; R. L. Robertson & Co., Contrs., Bedford; contract for steel tower and tank to Chicago Bridge & Iron Co., Chicago, at \$5200; filter equipment furnished by Roberts Filter Co. at \$8875; Deihl & Vance, Consult. Engrs., Norfolk, Va. (Lately noted inviting bids.)

W. Va., Burnsville—Burnsville Water & Light Co. inceptd.; capital \$75,000; W. E. Marple, John I. Bender, J. L. Coberly.

Woodworking Plants.

Ala., Neshota—Veneer.—Navco Hardwood Co., main office at Louisville, Ky., organized; capital \$500,000; E. V. Knight, Prest.; W. E. Falk, Secy.-Treas.; both New Albany, Ind.; John Churchill, V.-P. and Gen. Mgr., Box 202, Mobile, Ala.; install band and rotary-cut veneer mill; construction by owner; cut timber acreage estimated to contain 40,000,000 ft. lumber. (Supersedes recent item.)

Ala., Opelika—Headings.—Opelika Heading Co. inceptd.; capital \$25,000; Frank, W. S. and Flake Farley.

Ala., Tuscumbia—Furniture.—Tuscumbia Furniture Mfg. Co. organized; capital \$7500; A. Sebert, Mgr.; erect building; install mch.

Fla., Dunedin—Cigar Boxes.—Moore Mfg. Co., M. W. Moore, Prest.-Mgr.; erect 24x56-ft. plant; corrugated iron; wood floor; construction by day labor; install \$3000 cigar box mch.; daily capacity 1000 boxes. (Supersedes recent item.)

Fla., Miami—Sash Rollers.—A. B. A. Sash Roller Co. inceptd.; capital \$50,000; Lemuel O. Anderson, Prest.; W. F. Blanton, V.-P.; Franklin P. Anderson, Secy.-Treas.

Fla., Tampa—Office Furniture.—Tampa Show Case & Fixture Co., George T. Morgan, Mgr., Miami, Fla.; add mfr. of office furniture, cedar chests, etc.

Ga., Atlanta—Woodenware.—Zachry-Horsey Co. organized; capital \$100,000; W. H. Zachry, H. B. Horsey, J. S. Etheridge.

Ga., Augusta—Mill Supplies.—Augusta Mill Supply Co. inceptd.; capital \$10,000; George M. Carl, Ray A. Chesnut.

Ky., Louisville—Wagons.—Kentucky Wagon Mfg. Co., R. V. Board, Prest.; build additions; install mch.; more than double capacity; structures to include 4-story concrete office, foundries, forges, factories, warehouses, etc.; 18-acre site; new structures to cost exceeding \$1,000,000. (Supersedes recent item.)

La., Monroe—Staves.—Lucas E. Moore Stave

Co., New Orleans; erect stave plant; install mch.

Mo., St. Louis—Boxes.—Loy-Lange Box Co.; enlarge plant; increased capital from \$60,000 to \$120,000.

Okla., Oklahoma City—Millwork.—Aurelius-Swanson Millwork Co. inceptd.; capital \$150,000; E. L. and H. E. Aurelius, C. G. Beverage.

Tenn., Nashville—Hickory Products.—Tennessee Hickory Products Co. inceptd.; capital \$300,000; A. B. Ransom, R. T. Wilson, C. A. Dunning.

Tex., Dallas—Automobile Bodies.—Universal Body Co. inceptd.; capital \$50,000; R. R. and R. W. Jackson, F. H. Crow.

Va., Martinsville—Bed and Dining-room Furniture.—Ford-Witten Furniture Co. organized; capital \$500,000; O. D. Ford, Prest.-Mgr.; A. D. Witten, V.-P.; erect plant; brick construction; install sprinkler system, two 250 H. P. boilers, generators; \$50,000 woodworking mch. (See Machinery Wanted—Boilers; Generators; Woodworking Machinery.)

Fire Damage.

Ala., Fairfield—Fairfield Lumber & Coal Co.'s drykln.

Ky., Winchester—Eureka Tool & Oil Well Supply Co.'s plant; loss \$30,000.

Md., Aberdeen Proving Grounds.—Five buildings containing machinery and powder. Address Constructing Officer.

Md., Cumberland.—William H. Jones' farmhouse, Pekin.

Md., Elkton.—Wm. T. Gallagher's dwelling.

Miss., Aberdeen—Pickle Hotel; loss \$30,000; Elks Home; Bulck garage; Clopton Hotel; Mrs. A. L. Watkins, Mrs. L. F. Downing's and A. J. Evans' residences.

Mo., Holden.—Missouri Egg & Poultry Co.'s plant; loss \$50,000.

Mo., St. Louis.—Century Boat Club's boat-house, 5600 S. Broadway; loss \$29,000.

Mo., St. Louis.—M. Silverstein's apartment-house, 6966 Clayton Ave., St. Louis County; loss \$15,000.

N. C., Norwood.—Carolina Shale Brick Co.'s brick plant; electric power; loss \$55,000 to \$69,000; H. M. Morson, Gen. Mgr., Charlotte, N. C.

Okla., Oklahoma City.—Russell Jobbers Mills Co.'s warehouse and vinegar plant on 5th St.; loss \$75,000.

Tenn., Clarksville.—J. M. Abshire's residence, Guthrie; loss \$10,000.

Tex., Brownsville.—Government army warehouse at Camp Sam Fordyce; loss \$500,000.

Tex., Gregory.—Shell & McKeaster's cotton gin; loss \$20,000.

Tex., San Benito.—C. S. Reynolds' cotton gin; loss \$87,000.

Tex., Van Alstyne.—Home Ice & Mfg. Co.'s plant; loss \$30,000.

BUILDING NEWS

EXPLANATORY.

Buildings costing less than \$10,000 not covered in these reports.

BUILDINGS PROPOSED

Apartment-Houses.

Ark., Pine Bluff.—Adam J. Robinson; convert Florence Sanitarium into apartment-house.

D. C., Washington.—Howard Etchinson, Davidson Bldg.; erect \$200,000 apartment-house,

23d St. and Bancroft Pl.; brick; 44 apartments; 100x100 ft.; G. C. West, Archt., Homer Bldg.; construction by owner.

Fla., St. Petersburg.—O. D. Tiffany, People's State Savings Bank, Toledo, Ohio.; erect \$30,000 apartment-house; 85x33 ft.; cement block and stucco; wood joists; clay tile and

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

composition roof; hardwood and concrete floors; plaster-board; ventilators; Murphy beds; steel kitchens; Robinette-Bruyere-Cameron, Archts., Spitzer Bldg., Toledo. Address Owner.

Md., Baltimore.—Sarah R. Hendricks; convert dwelling, 21 E. Mount Vernon Pl., into apartment-house.

Mo., St. Louis.—Lee & Bush, Syndicate Trust Bldg.; prepared plans for \$50,000 apartment-house, Limit and Delmar Sts.; 2 stories; 4 suites; 50x110 ft.

Tex., Amarillo.—D. Roach, Cisco; erect \$65,000 apartment-house, 1105 Polk St.; 3 stories and basement; brick; 30 apartments; 96 rooms; natural gas heat.

Association and Fraternal.

Ala., Birmingham.—Negro Benevolent Protective Order of Elks; erect \$50,000 brick lodge, 8th Ave. and N. 12th St.

Ala., Mobile.—Ancient Free and Accepted Masons; plan to erect temple.

Ala., Mobile.—Knights of Columbus Home Building Assn., V. R. Pritchard, Chrmn. Board of Trustees; expend \$250,000 to repair building, Government and Warren Sts., for clubhouse.

Ga., Augusta.—Y. M. C. A.; erect 4-story building; 95 dormitory-rooms, gymnasium, handball courts, lounging-rooms, etc.

Ky., Carr's Fork (P. O. Hamden).—Midland Coal & Coke Co.; construct Y. M. C. A. (See Dwellings.)

Ky., Louisville.—Labor Union; erect \$150,000 temple.

Ky., Mayking.—Dye Coal Co.; erect Y. M. C. A. (See Dwellings.)

Ky., Owensboro.—Knights of Columbus, W. F. Rapier, Grand Knight; erect \$50,000 addition, 7th St.; auditorium, gymnasium, swimming pool.

Ky., Woodburn.—Consolidated Fuel Co.; construct Y. M. C. A. (See Churches.)

S. C., Clinton.—Order of A. F. and A. M.; erect temple, South Broad St.; 2½ stories; brick; 2 storerooms; moving-picture theater to seat 800; hall, clubrooms, etc.

Tenn., Knoxville.—Central Labor Union; erect \$50,000 temple.

Tex., Bay City.—Post No. 11, American Legion; erect \$50,000 home and gymnasium, Avenue F and 8th St.; 2 stories; 75x80 ft.; reinforced concrete; hollow fireproof tile; ornamental terra-cotta; metal roof, ceilings and doors; interior tile; concrete floors; steam heat, \$1200; electric lights; J. E. Large, Archt. Address W. S. Holman, Chrmn. Bldg. Comm. (Lately noted.)

Tex., Fort Worth.—Y. W. C. A., Miss Emma B. Childress, General Secy.; erect dormitory, Summit Ave.; Van Slyke & Woodruff, Archts.

Tex., Wichita Falls.—Young Women's Christian Assn.; erect \$100,000 dormitory building, 8th and Burnett Sts.; sleeping quarters, gymnasium.

W. Va., Montgomery.—Order of Eagles; erect home; brick; stone trim; R. M. Bates, Jr., Archt., First Natl. Bank Bldg., Huntington.

Bank and Office.

D. C., Washington.—Murray Printing Co., 1321 6th St.; erect \$25,000 office building, 920-24 U St.; 2 stories; 54x102 ft.; brick, concrete and hollow tile; Hutton & Co. Archts. 12th and U Sts.

Fla., Avon Park.—First National Bank; remodel building; install vault, 200 safety deposit boxes and solid marble fixtures.

Mo., St. Louis.—Lowenstein Bros. Real Estate Co., 105 N. 7th St.; erect \$750,000 film exchange, Olive St. and Theresa Ave.; 4 stories; 144x250 ft.; brick; fireproof; Widman & Walsh and G. Pankan, Archts., Wainwright Bldg.

N. C., Greensboro.—Jefferson Standard Life Insurance Co., Julian Price, Prest.; erect \$1,500,000 building, Elm and Market Sts., 15 stories; 150x50 ft.; fireproof; terra-cotta and granite; C. C. Hartmann, Archt. (Previously noted.)

N. C., Summerfield.—Farmers' Bank of Summerfield; erect building.

Tenn., Chattanooga.—First Trust and Savings Bank; remodel building; \$30,000; 65x92 ft.; J. K. & R. W. Stewart, Archts., Lincoln Inn Court, Cincinnati; Chas. E. Smith, Chattanooga, plumbing.

Tex., Columbus.—First State Bank; plans to erect building.

Tex., Graham.—Beckman National Bank; erect \$50,000 addition to building.

Va., Clarksville.—Planters' Bank of Clarksville; construct new front; brick and limestone; Carneal & Johnston, Archts., Chm. Comm. Bldg., Richmond.

Va., Petersburg.—Atlantic Coast Realty Co., Natl. Bank of Petersburg; erect \$80,000 office building, Union and Tobb Sts.; 2 stories and basement; 50x114 ft.; brick; F. A. Bishop, Archt., Terminal Bldg.

Churches.

Ala., Mobile.—St. Francis Street Methodist Church; erect addition. Address The Pastor.

Ark., Little Rock.—Greek Orthodox Church; erect brick building, 19th and Louisiana Sts.; tile roof; wood floors; Sanders & Glinochio, Archts. (Lately noted.)

Fla., Orlando.—Christian Science Society; erect 1 of 2 units planned, Summerlin Pl. and Rosalind Ave.; \$20,000; auditorium to seat 200.

Ky., Lexington.—Arlington Christian Church; erect \$20,000 to \$25,000 building, Carlisle Ave. and N. Limestone St. Address The Pastor.

Ky., Louisville.—Gypsy Smith Evangelistic Organization, J. H. Diekey, Chrmn. Gen. Comm.; erect \$20,000 tabernacle, Broadway between Brook and Floyd Sts.; 135x200 ft.; seat 5000.

Ky., Woodburn.—Consolidated Fuel Co.; construct church, school and Y. M. C. A.

La., Monroe.—First Baptist Church, colored; erect \$27,000 2-room brick building, N. 8th St. between Washington and Breard Sts. Address The Pastor.

Md., Crisfield.—Asbury M. E. Church, Rev. W. F. Corkran, Pastor; erect \$100,000 building; 116x86 ft.; stone; slate roof; board floors; steam heat; electric lights; rolling partitions; concrete floors; Geo. E. Savage, Archt., Witherspoon Bldg., Philadelphia. Address Jas. B. Lawes, Chrmn. Bldg. Comm., Crisfield. (Lately noted.)

Miss., Meridian.—Fifth Street Methodist Church; repair building damaged by fire. Address The Pastor.

Mo., Kansas City.—Tiphereth Israel Synagogue, Rev. Simon Shapiro, Rabbi; erect \$125,000 building, Admiral Blvd. and Tracy Ave.; construction begun.

N. C., Fayetteville.—First Presbyterian Church; erect Sunday-school building and alter church; 120x60 ft.; birch; slate roof; wood floors; steam heat; address Hobart B. Upjohn, Archt., 456 4th Ave., New York; plans issued about Aug. 30.

Okla., Oklahoma City.—Congregation, Rev. John A. Huff, Pastor; erect \$40,000 church, 1200 West Park Pl.

S. C., Anderson.—Pisgah Church; erect \$30,000 building, Slabtown. Address The Pastor.

S. C., Columbia.—Rose Hill Presbyterian Church; erect building. Address The Pastor.

Tenn., Knoxville.—Second M. E. Church, Rev. B. M. Martin, Pastor; erect \$50,000 building or improve present structure.

Tex., Oak Cliff.—First Baptist Church, Rev. B. O. Harrell, Pastor; J. B. McPhearson, Chrmn. Building Comm.; erect brick and concrete building.

Va., Alexandria.—Grace Episcopal Church, Thrifton; alter frame building; 1 story; C. A. Hunter, Archt., Davidson Bldg., Washington, D. C.; day labor.

Va., Danville.—Mt. Vernon M. E. Church, Rev. Dr. Robertson, Pastor; alter and erect addition to parsonage, S. Main St.; \$10,000; 2 stories; Heard & Chesterman, Archts., Arcade Bldg.

Va., Richmond.—Bethlehem Evangelical Lutheran Church, Rev. F. H. Menschke, Pastor, 500 N. 6th St.; considering erecting \$150,000 church and Sunday-school building, Ryland and Grace Sts.

W. Va., Huntington.—Dr. C. R. Enslow; erect \$15,000 residence, Ninth Ave.; 2 stories and basement; brick and stone; Wm. Francis Diehl, Archt., 608 R. & P. Bldg.

W. Va., Huntington.—Board of Trustees, R. F. Dunlap, Chrmn., Hinton, W. Va.; erect \$75,000 church; 2 stories and basement; 35x90 ft.; stucco and stone; H. Russ Warne, Archt., Masonic Temple, Charleston.

W. Va., Mt. Hope.—Presbyterian Church, P. Snyder, Chrmn. Board of Trustees; erect \$20,000 addition to building; Higgenbotham & Knapp, Archts., 702 Charleston Natl. Bank, Charleston.

City and County.

Fla., Miami Beach.—Fire Station, etc.—City; voted \$25,000 bonds for fire engine and equipment; defeated \$125,000 bond issue for municipal building. Address The Mayor. (Lately noted.)

Fla., Tampa.—Bandstand.—Board of Public Works, Henry Snow, Chrmn.; erect bandstand, Tampa, Bay Park.

La., Cedar Grove.—City Hall.—City; voted \$300,000 bond issue, including \$25,000 for city hall. Address The Mayor.

La., New Orleans.—Freight Shed.—Board of Comms., Port of New Orleans, W. O. Hudson, Prest., 300 New Court Bldg.; bids until Sept. 7 to furnish or furnish and erect structural steel for Poydras St. freight shed extension lately noted; plans and specifications at office Arsene Perrilliat, Ch. Engr. (See Machinery Wanted—Structural Steel.)

Mo., Kansas City.—Fire Station.—Fire and Water Board; erect No. 4 Fire Station, 14th and Penn Sts.; brick; 42x69 ft.; 2 stories.

Okla., Garber.—City Hall.—City; erect \$25,000 city hall; brick, concrete, tile and stone; 2d floor, auditorium to seat 500. Address The Mayor.

Tex., McKinney.—Market.—City voted \$30,000 to improve market square and erect livestock pavilion. Address The Mayor. (Lately noted.)

W. Va., Richwood.—Gymnasium.—City; erect \$50,000 gymnasium; 2 stories and basement; brick and stone; L. J. Dean, Archt., Foster Bldg., Huntington.

Dwellings.

Ala., Jasper.—Hilliard Coal Co., J. H. Enson, Prest.; W. B. Earnest, V. P.; erect number miners' dwellings, Hilliard.

Ark., Little Rock.—M. E. McCoy; erect 7-room cottage, Woodrow and Berry Sts.; \$10,000.

Fla., Kissimmee.—R. J. Roliff; erect bungalow, North Kissimmee.

Fla., Pensacola.—Capts. R. B. Sommerville and Roberts; erect row of 15 residences, E. Jackson St.; 2 stories; brick.

Fla., Punta Gorda.—Punta Gorda Investment Co. inceptd.; F. M. Cooper, Prest.; capital \$25,000; erect number of dwellings.

Fla., Sanford.—Geo. W. Knight Co.; erect 40 bungalows, Magnolia Park and Palmetto Aves.; electric lights.

Fla., St. Petersburg.—O. G. Heistand, American Bank & Trust Co.; erect residence, 5th Ave. and 2d St. N.

Fla., St. Petersburg.—Chamber of Commerce and Rotary Club; promoting company to erect houses; capital stock \$100,000; Herman Dann, Chrmn.; Chas. R. Carter, Secy.

Ky., Carr's Fork (P. O. Hamden).—Midland Coal & Coke Co.; construct 20 miners' houses, Y. M. C. A. and school.

Ky., Hazard.—W. E. Combs; erect six 4-room residences; contract at once.

Ky., Lee.—W. H. Draper; erect 12 miners' houses; contract at once.

Ky., Mayking.—Dye Coal Co.; erect miners' houses, Y. M. C. A. and coal tippie at Pine Creek; contract within 2 weeks.

Ky., Paducah.—D. Henry Hughes; erect residence, Fountain Ave. and Monroe St.

La., Monroe.—Dixie Investment Co.; erect two 1-story frame dwellings, 6 rooms, and four 4-room dwellings, McHenry St.; also five 1-story frame structures; 4 rooms, Polk St.; \$10,000 to \$15,000.

La., New Orleans.—Home Construction Co., J. W. Billingsley, Prest.; erect number of dwellings. (Previously noted.)

Md., Baltimore.—Overlea Realty Co., Belmar; erect \$10,000 cottage, Cherry Ave.; 2½ stories; frame; 26x30 ft.

Md., Baltimore.—Overlea Realty Co., Henry Kolb, Prest., Overlea; erect 2 frame cottages; \$10,000; 26x30 ft.; slate roof; pine floors; hot-water or pipeless furnace heat; plans and construction by owner. (Lately noted.)

Md., Baltimore.—Walter L. Westphal, Park Bank Bldg.; erect 17 2-story dwellings, 111-43 Collins Ave.; \$40,000.

Md., Chevy Chase.—W. C. and A. N. Mille, Union Trust Bldg., Washington; erect 4 residences, Quincy St.; \$100,000; 2 stories; 43x30 ft.; brick, frame and stucco; plans and construction by owner.

Mo., Kansas City.—Mrs. Ina Hitchens; erect \$75,000 to \$85,000 residence, 5300 Cherry St.; old English type; stucco, half timber; underburned hand-made brick; Roof & Siemens and Selby H. Kurfiss, Asso. Archts.; Hare & Hare, Landscape Archts.

N. C., Greensboro.—Proximity Mfg. Co.; erect 5 frame dwellings, Cypress St.; \$45,000; 7 rooms; shingle roof.

N. C., Hickory.—L. L. Moss; erect number of 5 and 6-room bungalows.

Okla., Chickasha.—M. E. Cralle; erect 7-room bungalow, 1100 block S. 8th St.; stucco finish.

Okla., Oklahoma City.—G. A. Nichols; erect six \$8000 residences, 21st St., and one \$3000 residence, 22d St.

Okla., Chickasha.—M. H. Sheperd; erect 4 bungalows, S. 10th St.

Okla., Chickasha.—Oatley Anderson; erect \$30,000 residence, 6th and Colorado Sts.; Spanish design; 10 rooms; 2 stories; brick veneer; slate shingle roof; oak interior finish.

Tenn., Chattanooga.—Dr. Edwin B. Anderson; erect 6 bungalows and garages, McCallie Ave.; hardwood floors; furnaces; also erect \$25,000 2-story residence.

Tenn., Nashville.—W. T. McEmore; erect residence and garage, 1900 Acklen Ave.; 2 stories; 10 rooms; brick.

Tex., Dallas.—Dallas Housing Co.; erect nine 5-room cottages, State and Weldon Sts.; \$27,000.

Tex., San Antonio.—Henry B. Wofford; erect \$30,000 residence, Summit Place; 40x50 ft.; 2 stories and basement; stone; clay tile roof; hardwood floors; hot-water heat. Address Phelps & DeWees, Archts., Gunter Bldg.

Va., Danville.—King Anderson, Prest. Anderson-Hunter Construction Co., Dudley Bldg.; erect \$12,000 residence, N. Main St.; 2 stories; 30x40 ft.; brick; Heard & Chesterman, Archts., Arcade Bldg.; construction by owner.

Va., Norton.—Norton Coal Co.; erect about 40 dwellings, Norton-Wise Pike; 3, 4, 5 rooms; electric lights; also erect welfare building; schoolrooms, gymnasium, reading-rooms, etc. owner.

Va., Richmond.—Mrs. F. H. McGuire; alter and repair brick residence, 1003 Grove Ave.; \$10,000.

Va., Richmond.—C. O. Allen; erect 2 frame and stucco dwellings, 1690-02 Haynes Ave.; \$9000 each.

Va., Norfolk.—J. W. Watson, 314 Marlboro Ave.; erect residence; 2 stories; 26x44 ft.; stone and shingles; composition roof; hardwood, concrete and rift pine floors; hot-water heat, \$800; electric lights; interior tile; \$9000 without equipment; P. B. Moser, Archt., Law Bldg.; construction by owner.

W. Va., Bluefield.—Col. Wm. Leckie, Welch, W. Va.; remodel residence, Oakhurst Ave.; also erect dwelling.

W. Va., Charleston.—A. W. Cox; erect \$25,000 residence; 2 stories and basement; 40x60 ft.; H. Russ Warne, Archt., Masonic Temple.

W. Va., Fairmont.—Mrs. Rosetta Reed; erect residence, West End Addition.

W. Va., Gilbert.—Guyan Colliery Co.; erect 50 dwellings, \$100,000; materials supplied by Minter Homes Corp., Huntington, W. Va.

W. Va., Huntington.—Meanor & Handloser, 917 R. & P. Bldg.; prepare plans for \$20,000 residence; 2 stories and basement; 28x36 ft.; stone and stucco.

W. Va., Huntington.—Meanor & Handloser, 917 R. & P. Bldg.; prepare plans for \$30,000 residence; 2 stories and basement; 28x45 ft.; brick; stone.

W. Va., Warwood.—Concrete Products & Building Co., Wheeling Bank & Trust Bldg., Wheeling; erect 100 two-story concrete dwellings; A. F. Dayton, Archt., 1 Homewood Ave., Wheeling.

Government and State.

S. C., Parris Island.—Hospital.—Bureau of Yards and Docks, C. W. Parks, Chf.; bids until Sept. 1 for tile and composition floors, marble and slate work in hospital buildings, Marine Barracks; drawings and specifications No. 4262 from Commandant Sixth Naval Dist., Navy-yard, Charleston, S. C., or from Post Commander, Marine Barracks, Parris Island.

Tex., Waco.—Home.—Home for Dependent and Neglected Children, Anne Webb Blanton, Secy., Austin; erect 2 buildings; 40x80 ft. and 30x32 ft.; brick and concrete; wood floors on concrete; steam heat; bids opened Aug. 30; E. McIvor Ross and E. H. Reed, Asso. Archts. (Lately noted.)

Tex., Waco.—Home.—Comsn. for Home for Neglected and Dependent Children, Lieut. Gov. W. A. Johnson and others, Austin; bids until Aug. 30 to erect 3 brick and concrete buildings; \$100,000; ultimate plans call for 12 buildings; plans and specifications at State Dept. of Education, Miss Annie Webb Blanton, Secy., Austin, and also at office of E. McIvor Ross, Waco, and E. H. Reed, Cisco, Tex., Archts. (Lately noted.)

Va., Portsmouth.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supvr. Archt., Washington, D. C.; bids received until Aug. 30 by John A. Love, Asst. Postmaster, Portsmouth, to alter postoffice building; bids received Aug. 21 to install \$500 lighting system.

Hospitals, Sanitariums, Etc.

Ark., Little Rock.—Royal Circle of Friends, Scipio A. Jones, Chrmn. Comm.; erect \$75,000 hospital.

La., New Orleans.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C.; erect \$600,000 hospital for discharged soldiers, sailors and marines; 22½-acre site.

Mo., Nevada.—State Hospital, M. T. Davis, Supt.; erect \$75,000 building; 3 stories and basement; 32x81 and 26x28 ft.; brick; stone trim; reinforced concrete; Hawkins & Hoener, Archts., McDaniels Bldg., Springfield; bids opened Aug. 18. (Lately noted.)

N. C., Gastonia.—County Commrs.; considering \$150,000 bond issue to erect tubercular hospital; bill authorizing election pending in Legislature.

S. C., Greenwood.—Greenwood Hospital Association, Mrs. E. D. Andrews, Prest.; bids until Sept. 25 to erect addition to Greenwood Hospital; 2 stories and basement; brick veneer; 36x80 ft.; steam heat; electric wiring; plumbing; plans at office James C. Hemphill, Archt. (Previously noted.)

Tex., Austin.—State Board of Control, S. B. Cowell, Chrmn.; bids until Aug. 30 to erect hospital building, install plumbing, heating and wiring and repair State Confederate Home; plans from C. H. Page & Bro., Archts. (Lately noted.)

W. Va., Beckley.—King's Daughters, Mrs. W. M. Taylor, Chrmn. Comm.; erect \$50,000 general hospital.

Hotels.

Fla., St. Petersburg.—J. Mott Williams, Sr.; erect 6-story hotel, 2d Ave. S.; brick; roof garden; 2 storerooms on lower floor.

Ga., Dawson.—Dawson Hotel Co., W. H. Locke, Secy.; opens bids Sept. 15 to erect 40-room fireproof building; 3 stories; \$100,000; plans and specifications from office P. E. Dennis, Archt., Macon; information from Mr. Locke or Mr. Dennis.

Mo., Desloge.—Goff Mineral Springs & Hotel Co., J. L. Goff, Prest.; plans to erect hotel and bathhouse.

Miscellaneous.

Ala., Mobile.—Fair.—Gulf Coast Fair Assn.; erect building.

Ky., Royalton.—Boarding-house and Office, Dawkins Lumber Co., Ashland, Ky.; erect \$10,000 boarding-house and office; 2 stories, 33x72 ft.; 1 story, 38x41 ft.; frame; J. W. King, Archt., Gaylord Bldg., Ashland.

Mo., Kansas City.—Undertaking Establishment.—A. P. Doehler & Co., 1403 E. 15th St.; erect \$30,000 building; 2 stories and basement; terra-cotta; stone trim; composition roof; S. H. Kurfiss, Archt., Scarritt Bldg.

N. C., Greensboro.—Clubhouse.—Greensboro Cotillon Club, L. R. Pierson, Secy.; plans to erect clubhouse.

Okla., Chickasha.—Cafe.—Manhattan Cafe No. 2, 210 Chickasha Ave.; remodel building.

Okla., Chickasha.—Cafe.—Little Lee Huckins Cafe; erect 25x100-ft. brick building on Chickasha Ave. between 2d and 3d Sts.

S. C., Laurens.—Geo. M. Wright, Prest., organization to erect joint clubhouse for Laurens and Clinton.

S. C. Rock Hill—Clubhouse.—Hamilton Carhart Cotton Mills, B. L. Ivey, Resident Mgr.; erect community clubhouse at Mill No. 1; swimming pool, 40x80 ft.; \$15,000 to \$18,000.

S. C. Sumter—Clubhouse.—Sumter Country Club, H. A. Moses, Prest.; erect clubhouse; 1 story; construct tennis and golf courts.

Tex., Albany—Orphanage.—Reynolds Presbyterian Orphanage; rebuild dormitory lately noted damaged by fire; fireproof; \$100,000.

Va., Norfolk—Market.—Tunstall & Arrington, Bank of Commerce Bldg.; prepared plans for remodeling market on Church St.; 1 story; brick; \$10,000.

Va., Norton—Welfare Building.—Norton Coal Co.; erect welfare building. (See Dwellings.)

Schools.

Ala., Anderson.—Lauderdale County Board of Education, D. O. Warren, Supt., Florence; erect \$15,000 school.

Ala., Bay Minette.—State, W. D. Stapleton, Chrmn. Bldg. Comm.; erect \$45,000 high school; 150x180 ft.; brick; metal roof; concrete floors; steam heat; city lights; bids until Sept. 28; J. P. Roberts, Archt., Montgomery.

Ark., Caledonia.—Caledonia Baptist Academy, Rev. W. K. Wharton, Supt.; erect girls' dormitory in addition to 2-story brick main building under construction.

Fla., Geneva.—Special School Tax Dist. No. 5; votes Sept. 5 on \$15,000 bonds to erect, enlarge and improve schools; T. W. Lawson, Supt. of Public Instruction, Sanford, Fla.

Ky., Carr's Fork (P. O., Hamden).—Midland Coal & Coke Co.; erect school. (See Dwellings.)

Ky., Paducah.—Board of Education; erect \$150,000 school; accommodate 500; brick; composition roof; concrete and maple floors; vacuum system of steam heat; hollow fireproof tile; ventilators; Nevin, Henry & Wischmeyer, Archts., Starks Bldg., Louisville. (Lately noted.)

Ky., Woodburn.—Consolidated Fuel Co.; construct school. (See Churches.)

Ky., Yeaman.—Grayson County Board of Education, Mrs. Effie Sadler Basham, Supt., Courthouse, Leitchfield, Ky.; erect \$10,000 to \$12,000 rural school; 2 stories; 23x71 ft.; 4 rooms; frame; Thos. J. Nolan, Archt., Courier-Journal Bldg., Louisville. (Lately noted.)

La., Kilbourne.—West Carroll School Board, Oak Grove, La.; erect \$30,000 school; 8 rooms and auditorium; brick; Barrett specification roof; wood floors.

Miss., Gulfport.—School Board; erect \$50,000 school; bids until Sept. 10.

Miss., Washington.—Washington Consolidated School Dist.; voted \$10,000 bonds to erect school; R. B. Forman and others, Commissioners of Education. (Lately noted.)

Miss., West.—School Board; erect school; vote Sept. 6 on \$15,000 bonds.

Mo., Kansas City.—Board of Education, J. B. Smith, Archt.; erect \$10,000 school; addition to Wm. Cullen Bryant School; two stories and basement; brick and reinforced concrete; stone trim; composition roof; C. A. Smith, Archt., Finance Bldg.

Mo., Willard.—Willard Consolidated School Dist. Trustees; erect \$30,000 school; bonds voted.

N. C., Charlotte.—Biddle University; plans to erect \$50,000 dormitory.

N. C., Gastonia.—County Board of Education; considering \$550,000 bond issue to erect high-school building; bill authorizing election pending in Legislature.

Okla., Acme.—Board of Education, O. C. Miller, Clerk; erect brick and frame school building for Dist. No. 1; 1 story; E. H. Eads, Archt., 514 First National Bank Bldg.

Okla., Granton.—Board of Education, A. L. Bloss, Clerk; erect \$30,000 school; 2 stories and basement; 55x77 ft.; brick; stone roof; composition roof; yellow-pine floors; W. V. Street, Archt., Murdock Bldg., Wichita, Kans. (Lately noted.)

Okla., Ripley.—Board of Education, G. G. Youngblood, Clerk; erect high school; considering bids.

S. C., Graniteville.—Graniteville Manufacturing Co.; erect \$100,000 grade and high school; 60x120 ft.; 20 classrooms, auditorium, domestic science, manual training and textile training departments; buff brick; granite base; wood and steel joist construction; concrete and asphalt floors; tin roof; galvanized iron cornice; alternate construction all metal lumber or steel tile; plaster walls and ceilings; electric lights; hot-air heat; blowers and ventilating system; composition blackboards; bids until Sept. 6; separate bids on heating and plumbing; estimates desired on all materials; plans at office Willis Irvin, Archt., 1404 Lamar Bldg., Augusta, Ga., and at Builders' Exchange, Atlanta. (Lately noted.)

S. C., Chester.—T. H. White, Chrmn.; bids until Sept. 10 for all or part of \$25,000 school-improvement bond issue of Dist. No. 1. Address J. C. McLure, Secy.

S. C., Green Sea.—Green Sea Township, M. J. Bullock, Supt. of Education Horry County, Conway, S. C.; bids until Sept. 1 to erect 8-room 2-story frame school in Dist. No. 7; plans and specifications at County Commr.'s office and office Mr. Bullock.

Tenn., Spring Hill.—Spring Hill School Trustees; erect school; \$10,000 bonds voted.

Tex., Austin.—University of Texas, L. P. Lockridge, Bus. Mgr.; plans to erect chemistry and zoology buildings; G. E. Endress, Resident Archt.

Va., Belle Haven.—Dist. School Board, C. C. Joyner, Chrmn., Onancock, Va.; erect \$20,000 school; 70x70 ft.; brick; Carneal & Johnston, Archts., Chamber of Commerce Bldg., Richmond; construction by owner.

Va., Martinsville.—School Board; erect high school; 50x100 ft.; hollow fireproof tile; brick walls; wood partitions; tar and gravel roof; ornamental terra-cotta; concrete and wood floors; plaster-board; steel sash and trim; rolling partitions; warm-air heat, fan system; ventilators; electric lights; W. C. Northup, Archt., Winston-Salem, N. C.

Va., Richmond.—School Board; erect school at Fendall Ave. and Crawford St.

W. Va., Charleston.—Union Dist. Board of Education, J. A. Shaver, Prest., Dunbar, W. Va.; erect \$100,000 school; brick and stone; Egan & Reese, Archts., Charleston. (Lately noted.)

W. Va., Chattoe.—Lee Dist. Board of Education, Evan Thomas, Prest., Cliderella, W. Va.; erect \$15,000 high school; R. M. Bates, Jr., Archt., First Natl. Bank Bldg., Huntington, W. Va.

W. Va., Dunbar.—Union Dist. Board of Education, J. A. Shaver, Prest.; erect schools at various locations; Paul Egan, Archt., Day & Night Bldg., Charleston. (Lately noted.)

W. Va., Hemphill.—Board of Education, W. C. Hall, Prest., Welch, W. Va.; erect \$50,000 grade school; 2 stories and basement; 63x65 ft.; brick and stone; A. B. Mahood, Archt., L. & C. Bldg., Bluefield.

W. Va., Huntington.—Board of Education, H. C. Walburn, Prest.; expend \$17,000 to remodel library; 2 stories and basement; brick

and stone; Meador & Handloser, Archts., R. & P. Bldg.

W. Va., McGraws.—Slab Fork Dist. Board of Education; erect high and grade school; 1 story; 70x90 ft.; stone or brick; Richard M. Bates, Jr., First Natl. Bank Bldg., Huntington, W. Va. (Lately noted.)

W. Va., Slab Fork.—Slab Fork Dist. Board of Education; erect 2 schools; 1 story; 32x60 ft. each; brick and stone; \$15,000; Wysong, Tufts & Jones, Archts., Princeton, W. Va.

W. Va., McWhorter.—Grant Dist. Board of Education, J. E. Batten, Secy., Lost Creek, W. Va.; erect frame school; bids opened Aug. 23; plans and specifications at office S. O. Davis, Prest. Board of Education, McWhorter, and office S. W. Ford, Archt., Latstetter Bldg., Clarksburg, W. Va.

W. Va., Wallace.—Board of Education; plans to erect school.

Stores.

Ark., Pangburn.—R. L. Taylor; erect building, Main St.

D. C., Washington.—Murray Bros. Printing Co., 1731 7th St.; erect \$25,000 store and office building, 920-24 U St.; 2 stories; 54x102 ft.; brick, concrete and hollow tile; Hatten & Co., Archts., 12th and U Sts.

D. C., Washington.—Wash Coat Service Co., 1105 N St.; erect \$30,000 store; 2 stories; 35x100 ft.; Cutler & Woodbridge, Archts., 13th St. and New York Ave.

Ky., Blackey.—Dr. Gid. Ison; erect \$10,000 business building, Main St.; contract at once.

La., New Orleans.—Vaccaro Bros. & Co.; erect 4 buildings, Washington, Melpomene, Lopez and Rendon Sts.; \$15,000; L. H. Guerin Corp., Co. Archt.; construction by owners.

Okla., Temple.—B. & O. Mercantile Co.; erect \$100,000 store; 2 stories and basement; 100x140 ft.; brick; stone trim; fireproof; day labor; H. G. Olmstead & Co., Engrs., Oil Exchange Bldg., Oklahoma City.

S. C., Greenville.—S. H. Kress & Co., C. W. Kress, V.-P.; erect 2-story brick addition adjoining building.

Tex., Franklin.—M. A. Gilland; rebuild structure lately noted burned.

Tex., Franklin.—Elmo Reynolds; erect building to replace lately noted burned structure.

W. Va., Huntington.—Garrett Bros.; erect 1-story brick business building, 1329 3d Ave.; 60x155 ft.

Va., Norfolk.—Calrow, Wrenn & Tazewell, Monroe Bldg.; prepared plans for \$20,000 building, Park Ave.; 1 story; 90x70 ft.; brick.

Va., Norfolk.—Oscar Benson, Dickson Bldg.; erect building; 1 story; 100x142 ft.; brick; 5 stores; \$20,000; C. M. Weller, Archt., Dickson Bldg.

Theaters.

Ark., Paragould.—R. T. Meggiben; erect moving-picture theater.

Fla., Jacksonville.—Imperial Theater; expend \$10,000 to renovate interior; marble steps, tile lobbies, decorations, etc.

Fla., Orlando.—B. Beacham, Jr.; erect theater; concrete; seating capacity 700.

Ga., Macon.—C. K. Howell, Atlanta; preparing plans for reconstructing old Macon Theater, Cotton Ave., for Criterion Theater; seating capacity 1000; granite exterior finish; interior, mahogany; marble over sidewalk; mezzanine floor; proscenium arch 32 ft.; \$50,000.

Ky., Brooksville.—Patrick Flannery; promoting company to erect moving-picture theater; 2 stories; 30x100 ft.; brick; wood

floors; \$15,000; Douglas McDowell, Archt., Maysville, Ky.

Okla., Picher.—J. W. Cotter, Joplin, Mo.; expend \$50,000 to remodel interior of theater; 1 story; 75x170 ft.; C. H. Sudhoelter Co., Archt., Joplin.

W. Va., Wheeling.—G. Henry Dieringer; preparing plans for \$50,000 theater and office building; fireproof; terra-cotta, face brick, steel.

Warehouses.

Ala., Fort Payne.—Fort Payne Warehouse Co.; erect concrete warehouse.

Fla., Tampa.—Martino & Co.; erect warehouse, 1109-17 3d St.; 1 story; 130x95 ft.; brick; \$13,000.

S. C., Anderson.—Anderson Phosphate & Oil Co.; erect warehouse and sack plant.

S. C., Gaffney.—Cherokee Weaving Mills; erect warehouse, Limestone St.

Tex., Houston.—Galena Signal Oil Co.; erect warehouse and garage, near Hill St. bridge; reinforced concrete; \$30,000.

Tex., Pharr.—Humble Oil Co.; erect warehouse and office building to replace burned structure; 25x40 ft.; B. E. Tyree in charge of construction.

Va., Alexandria.—Mutual Ice Co., Harry Hammer, Mgr.; erect \$15,000 addition to receiving-room; 1 story; brick and steel; A. Leon Clark, Archt., 917 Price St.; construction by owner.

W. Va., Huntington.—Aaron Cohen; erect warehouse, Third Ave.; 2 stories and basement; concrete and steel; L. J. Dean, Archt., Foster Bldg.

& Forsyth, Archts., 701 S. W. Natl. Bank Bldg., Oklahoma City; Bass & Frankenfeld, Contrs., Enid.

Dwellings.

D. C., Washington.—D. C. Phillips; erect 3-story addition to residence, 21st and Q Sts. N. W.; brick and stone; McKim, Mead & White, Archts., 101 Park Ave., New York; W. P. Lipscomb Co., Contr., District Natl. Bank Bldg., Washington. (Lately noted.)

Fla., Daytona.—Irving Bachellor; erect \$25,000 bungalow, Winter Park; S. H. Gove, Contr.

La., New Orleans.—Anthony Tuso; erect \$11,300 bungalow; 1 story and basement; frame; H. A. Lagasse & Co., Contr.

Mo., Kansas City.—Frank H. Woodbury, Jr.; erect \$17,500 residence, 57th-St. terrace and Wornall road; 2 stories and basement; 28x44 ft.; C. E. Shepard, Archt., 508 Reliance Bldg.; O. O. Concannon, Contr., 2733 Myrtle Ave. (Lately noted.)

N. C., Charlotte.—Robt. Lassiter; remodel and erect addition to residence on E. 4th St.; 22 rooms; \$30,000; C. B. Kerr, Archt., R. N. Hunter, Contr.

N. C., Greensboro.—White Oak Mills; erect 100 employes' cottages; terra-cotta block; 4 and 6 rooms; J. L. Crouse, Contr.

Tenn., Chattanooga.—DeForrest Evans; erect \$10,000 1-story frame residence, 340 Fort Wood St.; E. H. Cooper, Contr.

Va., Portsmouth.—Richard Tunstall; erect \$25,000 residence and garage, Tanner's Creek Dist.; colonial type; weatherboard; S. B. Williamson, Contr.

Va., Portsmouth.—Mrs. Grace W. Hanbury; erect brick residence, Atlantic Blvd. and Richmond Crescent, Larchmont; W. F. Sawyer, Contr.

W. Va., Keystone.—T. Edward Hill; erect \$22,000 dwelling; brick and tile; tile roof; hardwood interior finish; vapor heat; Martin J. Garry, Archt.; H. A. Lucas, Contr., Law & Commerce Bldg.; both Bluefield.

W. Va., Keystone.—M. T. Whitto; erect \$15,500 residence; brick and tile; hardwood interior finish; vapor heat; Martin J. Garry, Archt.; H. A. Lucas, Contr., Law and Commerce Bldg.; both Bluefield.

Government and State.

Mo., Columbia.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Architect, Washington, D. C.; remodel postoffice; Threlkeld Contracting Co., Contr., 534 E. Johnson St., Philadelphia, Pa.

Va., Norfolk.—Warehouse.—Bureau of Yards and Docks, C. W. Parks, Chief, Navy Dept., Washington, D. C.; erect warehouse, specification 4222; J. H. Pierce, Contr., Norfolk. (Lately noted.)

Tenn., Chattanooga.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Architect, Washington, D. C.; remodel postoffice; W. P. Thurston Co., Contr., Richmond, Va. (Lately noted.)

Hospitals, Sanitariums, Etc.

Ark., Morrilton.—Jones Hospital; erect \$75,000 building; Lincoln-Jones Electric Co., Contr. for electrical work, Conway.

Ga., Macon.—Drs. W. C. Pumpelly, G. Y. Massenburg and others; remodel building for hospital, Walnut St., and erect 3-story addition; hollow tile and brick; Dunwoody & Oliphant, Archts.; J. H. B. Wilder Co., Contr. (Lately noted.)

S. C., Charleston.—Roper Hospital; erect \$100,000 infirmary on Calhoun St.; brick; 3 stories; McDevitt & Fleming, Contrs.

BUILDING CONTRACTS AWARDED

Apartment-Houses.

Ga., Macon.—Judge Maynard; convert residence on Washington Ave. into apartment-house; 6 suites; \$12,000; Curran R. Ellis, Archt.; W. D. Griffin, Contr.

Association and Fraternal.

Tenn., Oliver Springs.—A. F. and A. M.; erect \$15,000 2-story brick hall; Allen Gardner, Contr.

Bank and Office.

Ga., Savannah.—Realty Investment Co., W. H. Stillwell, Prest.; remodel bank building; 60x90 ft.; Henrik Wallin, Archt.; Geo. C. Ransom, Contr. (Lately noted.)

Ky., Paducah.—Dr. C. W. Dawson, 424 S. 7th St.; erect \$25,000 office building; 2 stories; 18x17 ft.; D. Harry Jamison, Archt.; Langstaff Lumber Co., Contr.

Md., Baltimore.—Baltimore Commercial Bank, W. M. McCormick, Prest.; erect \$40,000 branch bank, Monument St. and Collington Ave.; 27x75 ft.; brick; slag roof; tile floors on concrete; hot-water heat; electric lights; cement sidewalks; Jos. Evans Sperry, Archt., Calvert Bldg.; B. F. Bennett Building Co., Contr., 123 S. Howard St. (Lately noted.)

Mo., Kansas City.—Bagby & Co.; erect \$50,000 office building; 50x142 ft.; steel; concrete joists; gravel roof; concrete with cement top floors; hollow fireproof tile; metal ceilings; ornamental terra-cotta; metal doors; wire glass; mail chutes; steam heat; Otis elevators, \$32,000; F. E. McIlvain, Archt., Orear Bldg.; Swenson Construction Co., Contr. (Previously noted.)

Mo., St. Louis.—Knight, Gamble & Co., 4th and Olive Sts.; remodel brick building for offices; stone foundation; \$100,000; J. S. Alberle Co., Contr., Boatman's Bank.

Mo., St. Louis.—Ralston Purina Co., W. H. Danforth, Prest., 821 S. 8th St.; erect \$130,000 office building, 8th and Gratiot Sts.; 4 stories and basement; 52x83 ft.; brick and reinforced concrete; plans by owner; Fruin & Colnon Construction Co., Contr., Merchants' Laclede Bldg. (Lately noted.)

Tex., San Antonio.—Texas State Bank & Trust Co.; improve ground floor of office building for banking-room; \$50,000; 58x83 ft.; fixtures; wainscoting floor; steel vaults and draperies; sides of Rookwood faience tile; Smith & Kelly, Archts. and Constr. Engrs., National Bank of Commerce Bldg.

W. Va., Charleston.—O. F. Payne, Charleston St. and Tennessee Ave.; erect \$60,000 bank

and office building, Charleston St. and Bigley Ave.; 3 stories; 40x110 ft.; brick; Higgenbotham & Knapp, Archts., Charleston National Bank Bldg.; Carcelon & Glover, Contrs. (Previously noted.)

W. Va., Weirton.—Bank of Weirton, E. T. Weir, Prest.; erect \$35,000 building; 1 story and basement; 40x70 ft.; Peterson & Clarke, Archts., Nath Bldg., Steubenville, O.; Guy Johnson Contracting Co., Contr., Toronto, O.

Churches.

Md., Baltimore.—St. Paul's Lutheran Church, Rev. Phillip A. Heilman, pastor; erect Sunday-school building, Baker and Longwood Sts., Walbrook; 37x84 ft.; 2 stories; stone and Port Deposit granite; slag and slate roof; Alabama pine floors; electric lights; steam heat; sheet metal work; tiling; copper rain spouts; \$60,000; Clyde N. Friz, Archt., Lexington Bldg.; Milton C. Davis & Son, Contr., 902 W. 36th St.; also considering \$125,000 church. (Previously noted.)

N. C., Hollis.—Methodist Church; erect \$14,500 building; stone; 60x60 ft.; cross-shaped; metal roof; cement and concrete floors; gas lights; metal ceilings; plaster board; wire glass; steel and sash trim; J. P. D. Withrow, Archt. and Contr. (Lately noted.)

W. Va., Huntington.—St. Joseph's Church, Rev. H. B. Altmeyer, Pastor; erect \$25,000 addition to building; 1 story and basement; 25x60 ft.; W. B. Smith, Archt., 709 K. & P. Bldg.; Henry Person, Contr. (Lately noted.)

Tex., Austin.—University Baptist Church; erect \$120,000 building, 22d and Guadalupe Sts.; 2 stories; 99x114 ft.; brick, reinforced concrete and steel; reinforced concrete floors; W. C. Hedrick Co., Contr., Guadalupe and 22d Sts.

W. Va., Keystone.—Whittico Memorial Church; erect \$18,000 building; brick and tile; H. A. Lucas, Contr., Law & Commerce Bldg., Bluefield.

City and County.

Fla., St. Petersburg.—Bandstand.—City Park Board, W. F. Smith, Chrmn.; erect \$10,000 bandstand, Williams Park; comfort stations in basement; W. S. Shull, Archt.; J. S. Silas, Contr.

Mo., Hamilton.—Library.—Hamilton Public Library; erect \$20,000 building; 1 story and basement; 30x60 ft.; R. E. Peden, Archt.; Mosby-Goodrich Construction Co., Contrs., both New York Life Bldg., Kansas City. (Previously noted.)

Okla., Enid.—Auditorium.—City, R. T. Williams, Clk.; erect \$219,000 auditorium; 3 stories and basement; 128x230 ft.; Layton, Smith

Tex., El Paso.—Southern Baptist Sanitarium, Dallas; erect \$350,000 hospital; fireproof; tile and composition roof; terrazzo floors; steam heat; Schmidt, Garden & Martin, Archts., 104 S. Michigan Ave., Chicago; Hendrick Constr. Co., Contr., Dallas. (Lately noted.)

Tex., Gonzales.—Dr. Geo. Holmes; erect \$50,000 hospital; 25 rooms; brick and tile; tile roof; pine floors; steam heat, \$6000; lighting plant, \$4000; elevators, \$500; hollow fireproof tile; Fred Melsenhelder, Archt. and Contr. Address Dr. Holmes. (Lately noted.)

Miscellaneous.

Fla., Lake Wales — Clubhouse. — Mountain Lake Corp., 120 Broadway, New York; erect \$100,000 addition to clubhouse; 38x130 ft.; 3 stories; stucco on frame; composition roof; cement and wood floors; steam heat; electric lights; E. M. Parsons & Co., Archts., Boston, Mass.; G. A. Miller, Contr., Tampa, Fla.

Railway Stations, Sheds, Etc.

Ky., Louisville.—Baltimore & Ohio R. R., H. A. Lane, Ch. Engr., Baltimore; construct freight shed; 40x100 ft.; steel frame; concrete foundations and floor; corrugated asbestos protected metal roof; concrete floors; electric lights; L. P. Kimball, Engr. for B. & O. R. R., Baltimore; Wm. Dwyer, Contr., Cincinnati, O.

La., Wilkesville.—Missouri Pacific R. R., T. A. Hadley, Ch. Engr., Railway Exchange Bldg., St. Louis; erect \$15,000 station; 1 story; 52x16 ft.; E. M. Tucker, Archt., care owner; H. O. Hirsch, Contr., Wainwright Bldg., St. Louis.

Schools.

Ala., Gadsden.—City Board of Education; erect 2 additional rooms to Etowah Avenue school; construct roof on 11th Street school; improve interior of Striplin school; contracts let.

Ala., Waterloo.—School Board; erect \$10,000 school; 7 rooms; frame; composition shingle roof; pine floors; contract let. Address J. L. Cooper. (Lately noted.)

Fla., Miami.—Dade County Board of Public Instruction, R. E. Hall, Supt.; erect addition to Riverside, Southside, Buena Vista and Highland Park schools; also buildings in colored settlement and in Johnson St.; cement blocks; masonry walls; frame partitions; built-up asphalt roofs; wood floors; B. B. Kitchen and E. B. Johnson, Contrs. for laying concrete blocks; I. E. Schilling Co. and Baker & Holmes, steel; Ryan & Rutherford and Biscayne Novelty Works, mill work; Monad Electric Co., electric work; Alexander Orr, plumbing; E. A. Nolan, Archt., Townley Bldg., will supervise construction. (Lately noted.)

Ky., Richmond.—Board of Regents Eastern Kentucky State Normal School; erect girls' dormitory and addition to boys' dormitory, lately noted; 3 stories and basement; brick; \$180,000; C. C. & E. A. Weber, Archts., 3d and Walnut Sts., Cincinnati; C. A. Rawlings, Contr., 10 Chafonte Ave., Fort Thomas, Ky.; bids until Sept. 4 to install heating system; plans at office architects. (See Machinery Wanted—Heating Plant.)

La., Kolin.—Rapides Parish School Board, J. W. Bolton, Prest., Alexandria; erect 2-room

schools at Kolin and Wise; C. Scott Yeager, Archt.; T. L. Neff, Contr.; both Alexandria; also erect teachers' cottage at Camp Ground school near McNary; R. J. Brewer, Contr., Lecompte, La. (Lately noted in part.)

La., New Iberia.—St. Peter's College; erect building for laboratory and classrooms; \$9000 without equipment; 33x60 ft.; frame; concrete foundation; paper roof; pine floors; stoves; electric lights; Eugene Guillot, Contr., 722 Iberia St.; building material, chemical equipment, seats, etc., purchased. (Lately noted.)

Mo., Kansas City.—Board of Education, J. B. Jackson, Jr., Secy.; erect Switzer school addition; 1 story and basement; Smith, Rea & Lovitt, Archts., Finance Bldg.; Bert Elmer, Contr., 1004 W. 33d St.

Mo., Slater.—Board of Education; erect \$70,000 high school; 2 stories and basement; 60x66 ft.; brick; stone trim; composition roof; J. H. Felt & Co., Archts., Grand Avenue Temple Bldg., Kansas City; Sam Hotchkiss, Contr., 18th and Penn Sts., St. Joseph, Mo. (Lately noted.)

Mo., Wheeling.—Board of Education, Clifton Cornwell, Supt.; erect \$25,000 school; 2 stories and basement; 50x82 ft.; brick; stone trim; composition roof; R. H. Sanneman, Archt., Reserve Bank Bldg., Kansas City, Mo.; J. J. Hoffman, Contr., Milan, Mo.

Mo., Webster Groves.—Board of Education, S. T. Honig, Prest.; erect Bristol School addition; \$78,400; Fred Howell, Contr., N. Taylor Ave., Kirkwood, Mo.; also erect Avery School addition; \$60,000; 2 stories; 80x90 ft.; brick and reinforced concrete; Wm. McDonald, Contr., Odd Fellows' Bldg., St. Louis; Wm. B. Ittner, Board of Education Bldg., St. Louis, Archt. for both structures. (Lately noted.)

N. C., Charlotte.—City School Board; install low-pressure steam heating system in South school; \$12,445; Toomey Plumbing Co., Contr. for installation; N. C. Burns, construct furnace-room, also chimney 68 ft. high.

W. Va., Belle.—Malden Dist. Board of Education, J. E. White, Prest., Malden, W. Va.; erect school; G. M. Jones, Contr., Malden.

W. Va., Bramwell.—Board of Education, F. S. Baker, Prest.; expend \$30,000 to remodel school; 2 stories and basement; A. B. Mahood, Archt., L. & C. Bldg., Bluefield; Lee Clark, Bramwell, Contr. on percentage basis.

Stores.

Ala., Birmingham.—J. B. Reid, 515 N. 20th St.; erect \$25,000 building; 60x120 ft.; brick and concrete; gravel roof; concrete floors; Arcola heating system; H. D. Breeding, Archt.; Chas. J. Alley, Contr. (Lately noted.)

Ark., Bearden.—Riggs Bros.; erect brick building; 100x150 ft.; McCabe & Mosley, Contrs.

Fla., Jacksonville.—Telfair, Stockton & Co.; remodel building, Duval and Laura Sts.; Basil P. Kennard, Contr.

Fla., St. Petersburg.—Ray Kimball and Geo. Dietz; erect building, 3d St. and 1st Ave. N., for 23 stores and airdome auditorium; Geo. Feltham, Archt.; Eggart Construction Co., Contr.

Miss., Pontotoc.—W. C. Pittman; erect 2 stories; 68x86 and 42x86 ft.; brick; metal roof; wood block, hardwood and concrete floors; E. M. Cruse, Contr. (Lately noted.)

Mo., Kansas City.—F. H. Thwing, Finance Bldg.; erect building, 13th and Walnut Sts.; 49x115 ft.; Geo. F. Green, Archt., Rialto Bldg.; Pratt-Thompson Construction Co., Contr., Republic Bldg.

Mo., Kansas City.—H. L. Tomlin, Sharp Bldg.; erect \$25,000 business building; 1 or 2 stories and basement; 37.5x120 ft.; brick; stone trim; composition roof; J. G. Braecklein, Archt., Victor Bldg.; Geo. E. Bowling & Son, Contrs., Sharp Bldg.

Mo., Kansas City.—Parisian Cloak Co.; erect 1-story addition to building, 11th and Main Sts.; \$20,000; F. E. McIlvain, Archt., Orear-Leslie Bldg.; Swenson Construction Co., Contr., Shubert Theater Bldg.

Mo., St. Louis.—W. A. Lucas, 3411 Halliday St.; prepared plans for \$15,000 store, 4942 W. Florissant St.; Kissel & Sons, Contrs., 2146 College Ave.

Tex., Franklin.—J. L. Scott; erect 2 brick buildings, lately noted burned; contract let.

Tex., Franklin.—E. Hohertz; rebuild structure lately noted burned; contract let.

Tex., Sinton.—Swinney Co.; erect hollow-tile addition adjoining building; contract let.

Va., Petersburg.—Watson Realty Co., 211 N. Sycamore St.; erect 6 stores on Union St.; 2 stories; 16x60 ft.; \$60,000; also \$30,000 store on N. Washington St.; 2 stories; 48x60 ft.; \$30,000; Jos. Seay & Co., Contrs.

Warehouses.

Ala., Troy.—W. L. Thompson; erect warehouse; fire walls; sprinkler system; contract let.

Ky., Covington.—City Ice Co., Harry D. Novell, Prest., 3210 Jefferson St., Cincinnati; rebuild burned warehouse, Front and Scott Sts.; 1 story and basement; 42x135 ft.; Bernard T. Wisnall, Archt. and Contr., 1643 Reading Rd., Cincinnati.

Ky., Paris.—Liggett & Myers Tobacco Co.; erect storage warehouse; capacity 8000 hhds.; also enlarge redrying plant; Geo. H. Rommell Co., Contr., Louisville.

Md., Baltimore.—Rombro Bros.; remodel warehouse, 22-24 S. Howard St.; \$25,000; 60x100 ft.; mill construction; fireproof; sprinkler system; extend steam heating plant; electric power and lighting; Geo. R. Callis, Jr., Archt., American Bldg.; Ullman & O'Leary, Contrs., 418 Aisquith St. (Lately noted.)

Mo., St. Joseph.—Excello Feed Mills; erect \$10,000 warehouse, 22d and Garfield Sts.; 1 story; 73x120 ft.; F. W. Hackett, Contr., 1023 Church St.

Mo., St. Louis.—S. N. Long, 828 Gratiot St.; erect \$15,000 warehouse, 9th and Gratiot Sts.; 1 story; 53x106 ft.; A. G. Nolan, Contr., Times Bldg.

Tenn., Memphis.—Memphis Terminal Corp., Central Bank Bldg.; erect 1-story concrete and frame warehouse; 300x600 ft.; \$100,000; F. B. Young & Son, Contrs., Bank of Commerce Bldg.

Tex., Galveston.—Bush & Witherspoon, J. C. Murphy, Local Mgr.; expend \$75,000 to rebuild cotton sheds between 29th and 30th Sts.; raise floor; construct brick and interlocking tile fire walls; automatic fire doors; composition tar and shell roof; install 2 monikers 40x240 ft., automatic sprinkler system, 4 electric fire gongs; capacity 10,000 bales; J. W. Zempter, Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Aerial Ferry.—C. L. Wilkins, Prest. Farmers' National Bank, Brenham, Tex. — Data and prices on aerial ferry to cross 150 to 200-ft. river.

Agricultural Machinery, etc.—Jose Millan Martinez, Huelva, Spain.—To represent mfrs.

of: Vine culture and wine-making mch.; horse-drawn plows; tools; automobile and motorcycle accessories; tires; tools; spare parts; canvas for sails; thread and cord for fish nets.

Automobiles, etc.—Caruana Freres, Sousse,

Tunisia, Africa.—To represent mfrs. of and dealers in: Automobiles; trucks; tractors; tires; wood of all kinds; hardware; automobile accessories; etc.

Bank Fixtures.—W. E. Hartman, King, N. C.—Safe, vault and other bank fixtures.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Belting (Leather), etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Sept. 7 to furnish: Leather belting; harness leather; chamolais skins; coke; pig-lead; window glass; fire brick; typewriter stands; gold leaf; acetone; oxalic acid; ethyl alcohol; lime; lye; soda ash; bicarbonate of soda; lard oil; soap; soap polish; benzine; kerosene; gas-engine oil; turpentine substitute; ferrotitanium; aluminum paint; asphaltum; bituminous solution; locomotive black; drop black; white lead; shellac; etc. Blank forms and information (Circular 1400) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Boiler.—Donahoe-Dougherty Lumber Co., Morristown, Tenn.—Good second-hand steel-incased twin boiler; 150 H. P. each.

Boiler.—Gulf Machinery & Investment Co., New Orleans, La.—100 H. P. locomotive type boiler; 125 lbs. working pressure.

Boilers.—John G. Duncan Co., N. E. Cor. Central and Jackson Sts., Knoxville, Tenn.—Jobbers' price on 40, 50 or 60 H. P. vertical boiler and 40, 50 or 60 H. P. locomotive fire-box boiler; A-1 condition; 125 lbs. pressure; delivery in next 30 days.

Bottles.—Newton Giant Incubator Corp., Harrisonburg, Va.—Names and addresses mfrs. 1-gal. glass jugs or bottles to use in oil-burning brooders.

Boilers.—A. D. Witten, V.-P. Ford-Witten Furniture Co., Martinsville, Va.—Two 250 H. P. boilers.

Bridges.—George J. Adams, Conslt. Engr., Norwalk, Conn.—Two single track railroad bridges, 80-ft. span.

Bridge Construction.—Johnson County Commrs., Claude White, Auditor, Cleburne, Tex.—Bids until Aug. 31; 18-ft. steel bridge across Nolan River; two 70-ft. spans on concrete pier and abutments; plans, etc., with Whiteaker & Washington, County Engrs.

Bridge Construction.—North Carolina State Highway Comsn., Div. Office, Greensboro, N. C.—Bids opened Aug. 25; bridges and culverts in Forsyth County; 5 structures under 20-ft. span; 40,550 lbs. reinforcing steel, specifications, etc., on file at State Highway Comsn., Raleigh, N. C.

Bridge Construction.—Marshall County Commrs., J. E. Chase, Clerk, Moundsville, W. Va.—Bids until Sept. 3; 25-ft. span bridge over Hogg Run; 25-ft. span bridge over Fish Run; both in Clay Dist.; 30-ft. span bridge over forks of Grave Creek in Cameron Dist.; 100-ft. span or two 70-ft. span bridges over Fish Creek in Liberty Dist.

Bronze Figures.—Wilmington Chamber of Commerce, J. H. Cowan, Secy., Wilmington, N. C.—Names and addresses mfrs. bronze figures for memorial monuments.

Cables and Posts.—L. L. Bean, Fort Meade, Fla.—Whiteway posts and cable; ¼ mi.; lighting both sides street; wanted information about styles and prices.

Car.—Pennsylvania Equipment Co., 1426 Chestnut St., Philadelphia, Pa.—Second-hand standard-gauge caboose car.

Car.—Gas Engine & Electric Co., 282 Meeting St., Charleston, S. C.—4-wheel tram car, gasoline engine motive power; used by railroad section hands.

Car.—Pennsylvania Equipment Co., 1426 Chestnut St., Philadelphia, Pa.—Second-hand steel underframe Pullman stock car for shipping show horses.

Cars.—C. O. Kitson, Secy.-Mgr. Blue Ridge Talc Co., Henry, Va.—Prices on 6 or 8 large rocker type 36-in. gauge dump cars.

Cars.—Wilmar Pocahontas Coal Co., L. O.

McLean, Mgr., Jaeger, W. Va.—Gross ton capacity 48-in. gauge mine cars; 16 in. from top of rail to top of car.

Cars.—Tuckaseegee & Southeastern Railway Co., James E. Walker, Roanoke, Va.—80,000-lb. flat cars and some side and center dump cars.

Cars.—Albion Kaolin Co., Hephzibah, Ga.—16 five-yard narrow-gauge dump cars.

Castings.—Mobile Copper Works, Box 1665, Mobile, Ala.—Names and addresses mfrs. malleable castings.

Castings, etc.—Board of Awards, Baltimore, Md.—Bids until Sept. 1; furnish and deliver manhole, sewer inlet and similar iron castings to Highway Engr.'s Dept.; f. o. b. cars or trucks storage yards.

Cotton Web Material.—General Engineering Agency, J. B. Parker, 146 Sixth St., Pittsburgh, Pa.—Names and addresses mfrs. cotton web strap or belt material, peculiar to woven web trunk straps, automobile accessory straps; both the web in rolls or with mfrs. who make complete belt or strap.

Conveyor.—C. O. Kitson, Secy.-Mgr. Blue Ridge Talc Co., Henry, Va.—Prices on 250 ft. 18 or 16-in. belt conveyor with rolls, idlers and drives complete; second-hand preferred.

Crane.—Turner Terminal Co., Mobile, Ala. Locomotive crane with drum to permit handling coal; 8-wheel American preferred.

Ditching Machine.—F. E. Twitty, Brunswick, Ga.—Ditching machine; for cutting up to 5-ft. depth and 2 to 4-ft. width; new or used if in good condition; send full description and advise lowest price.

Dredge.—Gilbert D. Von Phul, Hibernia Bank Bldg., New Orleans, La.—Steam dredge, 40-ft. boom, supplied with ¾ or 1-yd. orange-peel bucket; outfit to dig canals and construct levees; prices on new or second-hand equipment; second-hand preferred in excellent condition.

Drill Press.—DeWitt Machine Shop, B. F. Harshbarger, Mgr., DeWitt, Ark.—24-in. back-gear drill press.

Dryer.—Perry-Mann Electric Co., W. M. Perry, Prest., Columbia, S. C.—Names and addresses mfrs. motor-driven centrifugal dryer for family washing.

Engine.—DeWitt Machine Shop, B. F. Harshbarger, Mgr., DeWitt, Ark.—5 or 6 H. P. gasoline engine.

Engines.—Fred Riband, 403 Academy St., Greenville, S. C.—Names and addresses mfrs. small steam engines, marine preferred; 5 to 10 H. P., burning crude or kerosene oil.

Engine (Oil).—City, J. A. Richardson, Mgr., Erick, Okla.—Oil engines.

Excavating Machinery, etc.—Albion Kaolin Co., Hephzibah, Ga.—Excavating machinery; steam shovel, 1½ to 2-yd. bucket; 2 saddle-back narrow-gauge locomotives; 16-yd. narrow-gauge dump cars; 1 mi. 56-lb. rails.

Fiber Board.—J. R. Clark, Mgr. J. R. Clark Co., 810 People's Bank Bldg., Lynchburg, Va.—Names and addresses mfrs. fiber board for boxes.

Filtration Plant.—Sante Fe Railroad and City Young Men's Christian Assn., W. K. Wingfield, Secy., Temple, Tex.—Prices on complete recirculating and filtration plant to filter 78,000 gals. in 10 hours.

Filter Strainers, etc.—E. L. Sanderson, Hutchinson Bldg., Shreveport, La.—To correspond with mfrs. of filter strainers and handlers of filter sand and gravel.

Fishing Rods, etc.—Frank Fales & Sons, 61 Dock St., St. John, N. B.—Split cane fishing rods and reels.

Floor Planing Equipment.—E. L. Howard y Cia., Ave. Juarez 95, Mexico, D. F.—Names and addresses mfrs. motor-driven floor planing equipment.

Generator.—Town, J. A. Richardson, Mgr., Erick, Okla.—Direct-connected generator with engine.

Greases.—Caldwell Tanning Co., Box 554, Lenoir, N. C.—Greases for tannery.

Generators.—A. D. Witten, V.-P. Ford-Witten Furniture Co., Martinsville, Va.—400 K. W. generator, driven by 350 K. W. 600 R. P. M. 2300-volt 3-phase 60-cycle A. C. motor; 3 bearing generator with main driving pulley; Westinghouse, General Electric and Allis-Chalmers.

Grinder (Bench), etc.—Panama Canal, A. L. Flint, Gen. Purchasing Officer, Washington, D. C.—Bids until Sept. 9 to furnish: Bench grinder; pneumatic hoist; ice-cutting machine; motors; oil filter; platform scales; copper cable; heater cord; lamp cord; copper wire; eyebolts; brick and stone drills; cable clips; brass grommets; foundry nails; chain shackles; mule shoes; pipe straps; pipe turnbuckles; pressure gauges; porthole glasses; stepladders; door locks; oars sextants; wagon spokes; fire extinguishers; hose nozzles; automobile bells; cable terminals; annunciators; sockets; etc. Blank forms and information (Circular 1401) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Heating Plant.—District Commrs., 509 District Bldg., Washington, D. C.—Bids until Aug. 26; install heating and ventilating system in Petworth School and addition, 5th and Shepherd Sts. N. W.; plans, etc., with Chief Clk., Engr. Dept., 427 District Bldg.

Heating Plant.—Board of Regents, Eastern Kentucky State Normal School, Richmond, Ky.—Bids until Sept. 4 to install heating system in girls' dormitory and addition to boys' dormitory; plans at office C. C. & E. A. Weber, Architects, 3d and Walnut Sts., Cincinnati.

Hides.—Caldwell Tanning Co., Box 554, Lenoir, N. C.—Hides for tannery.

Iron, etc.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Sept. 4 to furnish: Stabolt iron; angle splice bars; spring steel; horse and mule shoes; kedge anchors; priming cups; water gauges; steel and bronze rope; copper, lead and brass wire; copper-wire cloth; snatch blocks; sandpaper; rubber cement; valve grinding compound; motor-boat hand horns; tire pumps; rubber tires and tubes; aluminum-ware; wheat; bran and graphite. Blank forms and information (Circular 1402) on application to Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

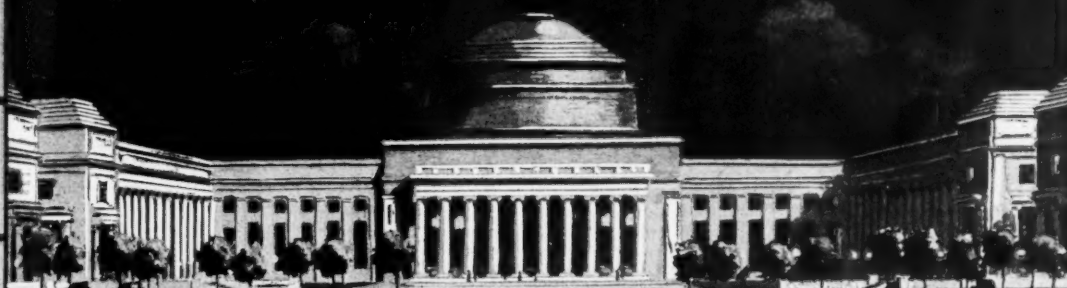
Levee Construction.—United States Engr. Office, 519 Canal St., New Orleans, La.—Bids until Sept. 8; construct 2,777,000 cu. yds. earthwork in Atchafalaya, Lafourche, Barataria, Pontchartrain and Lake Borgne Levee Dists.; plans on file.

Lighting System.—Chamber of Commerce, Herbert M. Harrison, Secy., Wichita Falls, Tex.—Bids until Sept. 1; install street lighting system; lay 30,245 ft. cable; construct 524 concrete bases and erect 324 lamp standards on Ohio, Indiana, Scott, Lamar, Travis, 7th, 8th, 9th and 10th Sts.; plans on file.

Locomotive.—Pennsylvania Equipment Co., 1426 Chestnut St., Philadelphia, Pa.—36-in. gauge American Mogul or 10-wheel type locomotive; not over 25 tons; 150 lbs. steam pressure; wheel base for 30 to 35-degree curves.

Locomotives.—Albion Kaolin Co., Hephzibah, Ga.

(Continued on Page 144)



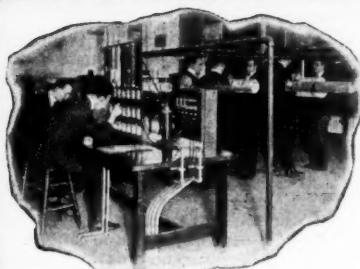
"85% Magnesia"

Steam Pipe and Boiler Covering

**- Saves coal
- adds heat**

**"If it's good enough for 'Tech'
—it's good enough for me"**

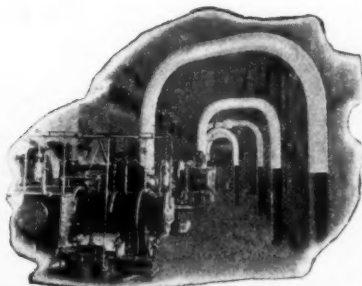
That's what every good engineer will say —because he knows that every item of equipment used in this great technical institute is the best procurable.



*How M. I. T. students
learn the heat-saving
value of "85% Magnesia."*

*Two Scenes in
Massachusetts
Institute of
Technology*

*Some of the Twenty
Miles of steam power
and heating pipes, in
M. I. T., covered with
"85% Magnesia."*



That is why "Tech" engineers selected "85% Magnesia" for all its boilers and its 20 miles of steam pipes. That is why "Tech" not only uses "85% Magnesia" but teaches its students how to understand its superlative heat saving qualities.

Not only "Tech" but the leading engineers and engineering societies use and endorse "85% Magnesia" because wherever it is used, it saves the maximum possible amount of coal and delivers the greatest possible amount of hot dry steam.

Wherever steam is used, whether for low pressures or the highest degree of superheat, "85% Magnesia" has made itself the world's standard of heat saving insulation.

For facts and figures, or for copies of the new Specification for the correct application of "85% Magnesia," write us today.

"85% Magnesia" products manufactured by the member companies of the M. A. A. here named are guaranteed to contain not less than 85% of the finest quality of basic Carbonate of Magnesia firmly bound with mineral fibre. This proportion gives maximum heat-saving value and durability.

**MAGNESIA ASSOCIATION
of AMERICA**

721 Bulletin Bldg. Philadelphia, Pa.

Executive Committee, Wm. A. Macan, Chairman
George D. Crabbe, The Philip Carey Co., Cincinnati, O.
Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Pa.
J. R. Swift, The Franklin Mfg. Co., Franklin, Pa.
R. V. Mattison, Jr., Keasbey & Mattison Co. Ambler, Pa.

Copyright 1920 by M. A. of A.
Permission to reprint
by application.

bah, Ga.—2 saddle-back narrow-gauge locomotives.

Locomotive.—A. C. Love Co., 208 Day and Night Bank Bldg., Huntington, W. Va.—Standard-gauge 70-ton switching locomotive.

Locomotive.—J. N. Pharr & Sons, Ltd., Olivier, La.—36-in. gauge locomotive; 14 tons; prefer six 30-in. drivers; second-hand; good condition.

Lumber.—Probert Sheet Metal Co., E. R. Probert, Mgr., 21 W. 8th St., Covington, Ky.—Prices on cypress and 2x4-in. yellow pine lumber for fire doors.

Lumber.—Probert Sheet Metal Co., E. R. Probert, Mgr., 21 W. 8th St., Covington, Ky.—Prices on fire-door tin, black and galvanized sheet metals, all sizes and gauges.

Machine Tools.—Ditta M. Fabry, Corino, Italy.—To represent mfrs. of: Tools and instruments of high precision, scientific instruments.

Mining Machinery.—H. C. Gillis, Prest. Hyup Coal Co., Williamsburg, Ky.—Bids until Jan. 17 mining machinery for 3-car daily output coal.

Motors.—Piedmont Electric Co., Asheville, N. C.—Prices on 55 H. P. and 75 H. P. motors; 220 volts, D. C., medium speed; immediate delivery; point of shipment.

Oils.—Birmingham Graphite Co., Slidell, La.—Prices on refined menhaden fish oil and china wood-oil.

Oil.—Panama Canal, A. L. Flint, General Purchasing Agent, Washington, D. C.—Bids until Sept. 22 to furnish Diesel oil. Blank forms and information (Circular 1404) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; United States Engr. offices throughout country.

Oil Mill.—United Machine Works, 57 W. 3d St., New York.—Dealers' prices on oil mill plant, excluding engine and boiler, to crush copra, linseed, rapeseed, teelseed, cottonseed, etc.; Anglo-American press system, capacity 5 to 20 cwts. per hour; state condition, age, etc.; boxed for export.

Paving.—Town, T. S. Jackson, Mayor. Vanceboro, N. C.—Bids until Sept. 20; 14,000 sq. yds. brick pavement; R. R. Eagle, Engr., Newbern, N. C.

Paving.—City, W. H. James, City Secy., Texarkana, Tex.—Bids until Aug. 23; 60,000 yds. on State Line Ave., Pine, Maple, Third and Seventh Sts.; asphaltic concrete on concrete base, brick on concrete and gravel base; plans, etc., with Otto Yenglin, City Engr.

Pipe.—Winchester Orchard Supply Co., C. F. Massey, Treas., Winchester, Va.—Names and addresses mfrs. wood pipe for conducting fruit juices.

Pipe.—Gibson & Mitchell, Contrs., Pauls Valley, Okla.—6000 ft. 1½-in. water pipe, black or galvanized.

Poles.—City, J. A. Richardson, Mgr., Erick, Okla.—300 light poles; 25 ft.; 6-in. top.

Pontoon Catamarans.—United States Engr. Office, Jacksonville, Fla.—Bids until Sept. 15; construct and deliver pontoon catamarans for dredge Mallery; information on file.

Rails.—Wilmer Pocahontas Coal Co., L. O. McLean, Mgr., Iaeger, W. Va.—16, 25 and 85-lb. rails; two No. 9 frog and switch equipments complete.

Rails.—Albion Kaolin Co., Hephzibah, Ga. 1 mi. 56-lb. rails.

Rails.—John G. Duncan Co., Central and Jackson Sts., Knoxville, Tenn.—12 mi. 60-lb. relay rails; new and second-hand.

Retorts (Portable).—S. M. Findley, Oak Park, Ga.—Names and addresses mfrs. portable retorts for distilling long-leaf yellow pine wood.

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Sept. 1; 19.8 mi. State highway in Franklin and Warren counties; 46,310 cu. yds. topsoil surfacing; specifications, etc., on file.

Road Construction.—Floyd County Commissioners Roads and Revenues, P. H. Vandiver, Chrmn., Rome, Ga.—Bids until Sept. 17; 7.3 mi. topsoil surfaced road; portion of Rome-Cedartown highway; Federal-aid Project 151; 17,172.5 cu. yds. surfacing; bridges and culverts; plans, etc., on file at Rome, at office Seventh Road Dist., Rome, and State Highway Engr., Atlanta, Ga.

Road Construction.—Johnson County Commissioners, Claude White, Auditor, Cleburne, Tex.—Bids until Aug. 31; 16 mi. highway on Rio Vista and Lone Willow roads in Precinct 1; 31,000 cu. yds. gravel surfacing; plans, etc., with Whiteaker & Washington, County Engrs.

Road Construction.—Durham County Commissioners, Durham, N. C.—Bids until Sept. 7; 4.52 mi. Fish Dam road between Durham and Robinson Grove Church; 10,400 cu. yds. topsoil; plans, etc., with F. E. Schnepfe, County Engr.

Road Construction.—North Carolina State Highway Comsn., Div. Office, Greensboro, N. C.—Bids opened Aug. 25; 6.68 mi. State highway in Caswell County; 17,650 cu. yds. topsoil surfacing; plans, etc., with Div. Engr., Greensboro; W. S. Falls, State Highway Engr., Raleigh, N. C.

Road Construction.—Union County Commissioners, W. B. Deneen, Union, S. C.—Bids until Sept. 3; 5.327 mi. roadway between Buffalo Mills and Spartanburg County line; South Carolina State Highway Dept., Project No. 92; 16,810.27 cu. yds. topsoil surfacing compacted; 21,853 cu. yds. overhaul on surfacing; plans, etc., on file at Union, with L. M. Weisiger, Div. Engr., Laurens, S. C., and Chas. H. Moorefield, State Highway Engr., Columbia, S. C.

Road Construction.—Rapides Parish Police Jury, J. F. Ball, Prest., Alexandria, La.—Bids until Aug. 31; changed date from Aug. 9; 16 mi. road from Forest Hill to Hineston; bridges and culverts; Ira W. Sylvester, Engr.

Road Construction.—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Aug. 30; 13.72 mi. Columbia-Monroe Highway; Section A; Caldwell Parish; information on file; Duncan Bule, State Highway Engr.

Road Construction.—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Aug. 30; 10.75 mi. Rayville-Monroe Highway; 13.26 mi. Rayville-Winnboro Highway; gravel; bridges; Richland Parish; information on file; Duncan Bule, State Highway Engr.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Aug. 31; 1.4 mi. State Highway on Legislative road between Morantown and Allegany; concrete; Allegany County, Contract A-18; plans, etc., on file.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Aug. 31; 2.04 mi. State Highway at Hereford from York road; concrete; Baltimore County, Contract B-38; plans, etc., on file.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Aug. 31; 2.14 mi. State Highway on Mountain road from end of concrete section to Jacobsville; concrete; Anne Arundel County, Contract AA-19; plans, etc., on file.

Safe.—See Bank Fixtures.

Sawmill.—E. E. Compton & Co., Box 570, Memphis, Tenn.—Complete 6 or 7-ft. band mill, including power, belting, etc.; complete specifications with location and lowest price in first letter.

Scrapers (Wheel).—C. E. Price, Contr., Huntington, W. Va.—Wheel scrapers.

Seating.—Lutheran Church, L. W. Fuchs, Chrmn. Comm., Thrall, Tex.—Second-hand pews for building 30x60 ft.

Sewers.—District Commrs., Room 509 District Bldg., Washington, D. C.—Bids until Sept. 7; 1000 lin. ft. concrete sewer; plans, etc., with Chief Clerk Engineer Dept., Room 427 District Bldg.

Shovel.—Albion Kaolin Co., Hephzibah, Ga. Steam shovel; 1½ to 2-yd. bucket.

Shovel (Steam).—C. E. Price, Contr., Huntington, W. Va.—Steam shovel; new.

Structural Steel.—Board of Commrs., Port of New Orleans, La., W. O. Hudson, Prest., 200 New Court Bldg.—Bids until Sept. 7 to furnish or furnish and erect structural steel for Poydras St. freight shed extension; plans and specifications at office Arsene Perilliat, Ch. Engr.

Tamping Machine.—Maryland Equipment & Supply Co., Equitable Bldg., Baltimore, Md.—Pawling and Harnischfeger tamping machine with breaker; gasoline driven.

Tanning Extracts.—Caldwell Tanning Co., Box 554, Lenoir, N. C.—Tanning extracts.

Tent.—Carolina Machinery Co., E. W. Moise, Prest., Sumter, S. C.—To rent tent with poles and equipment for exhibit at State Fair.

Tramway.—Wilmer Pocahontas Coal Co., L. O. McLean, Mgr., Iaeger, W. Va.—400-ft. aerial tramway.

Vault.—See Bank Fixtures.

Ventilating.—See Heating Plant.

Water-works Construction.—Town, W. H. Houston, Mayor, Tunica, Miss.—Bids until Sept. 8; extend water-works; erect 100,000-gal. concrete reservoir; 380 G. P. M. pumping unit (triplex pump and crude oil engine), etc.; plans, etc., with Town Clerk and Dabney Engineering Co., Randolph Bldg., Memphis, Tenn.

Water-works.—City of Lawrenceburg, Ky., J. L. Toll, Mayor.—Bids until Sept. 15; install pressure filtration plant and appurtenance; erect water-works building; plans with B. S. Griffy, Chrmn. Water-works Com.

Wire.—City, J. A. Richardson, Mgr., Erick, Okla.—Weatherproof wire, No. 6 or 8.

Woodworking Machinery.—DeLacour & Fabre, 19 Rue D'Aumale, Paris, France.—To represent mfrs. of: Portable and semi-fixed saws to work in forests; stump pullers; saws; planers; woodworking equipment.

Woodworking Machinery.—A. D. Witten, V.-P. Ford-Witten Furniture Co., Martinsville, Va.—General woodworking mch. for furniture mfr.

Railroad Construction

Railways.

Ark., Pine Bluff.—St. Louis Southwestern Rwy., it is reported, will immediately widen its roadbed from Pine Bluff to Jonesboro, Ark., 143 mi., and has let contract to W. P. McGeorge of Pine Bluff for the work. A. A. Matthews, Tyler, Tex., is Ch. Engr.

N. C., Sylva.—Tuckasegee & Southeastern Railway Co., chartered to build 35 mi. from Sylva to Lake Toxaway, N. C., will build at present only 15 mi. from Sylva to Tuckasegee, doing work with company forces under supervision of H. M. Luck, Contr., Roanoke, Va.; includes 2 wooden bridges over Tuckasegee River 175 ft. long; country rough. James E.

(Continued on Page 146)

Are You Getting Your Figure-Work Done Accurately and Economically?



Let a Few Monroe Users Answer This From Their Own Experience:

Eliminates Mental Strain

"The Monroe is practically automatic; complicated calculations can be made without mental strain, and an office boy can operate it after one explanation."—*Remington Arms and Ammunition Company.*

Saves 70% of Time

"In making up our reports and estimates, the Monroe saves us at least 70% of the time previously given to the work."—*International Harvester Company of America.*

Rapid and Accurate

"We count the Monroe as one of the best assets of the Company, as a medium of rapidity and accuracy in producing our statistical and financial statements."—*The Goodyear Tire and Rubber Company.*

Invaluable to Du Pont

"Our work covers a large detail of cost accounting and engineering problems. The Monroe is in operation continuously, and I do not know how we could grind out our daily and monthly accounting details without it."—*E. I. duPont de Nemours & Company.*

2 Hours Instead of 16

"Originally it took sixteen hours to calculate the data on Form 714 from Form 197 (payroll distribution forms). With the Monroe Calculating Machine it takes two hours."—*Westinghouse Air Brake Company.*

THE most striking testimony to the genuine dollars and cents value of the Monroe Calculating Machine is the commendations of big manufacturers who are letting it save time and money in their plants.

Thousands of Monroes are meeting the figure needs in the smallest as well as the largest concerns because it finds the answers to problems by the easiest and simplest way—direct from problem to answer.

No trained operators are needed. Anyone with a few minutes instruction on the Monroe can equal the volume of work

turned out by a specially trained operator on other machines.

There are no complements or reciprocals to worry about. Simply set the numbers on the Monroe keyboard and turn the crank—forward for addition and multiplication, backward for subtraction and division. Every calculation is proved. There on the proof dials and on the keyboard is the visible check on the accuracy of every calculation made.

Read what a few Monroe users say. Then let the Monroe convince you what they say is true in your own business. Send in the coupon for the "Book of Facts" or a demonstration—there's no obligation, whatsoever.



MONROE

REG. U. S. PAT. OFF.

Calculating Machine

The "SHOW ME" Coupon-Mail it today
 Without obligation (check items desired).
☐ Arrange for demonstration in our office
☐ on my own work.
☐ Send us a copy of "Book of Facts."
 My Name.....
 Address.....
 M. R. 8-26-20

Walker of Roanoke, Va.; Joseph Keys of Washington, D. C.; N. M. Davidson and V. R. Riley of Sylva, and others interested.

Tex., Paris.—\$100,000 receivers' certificates approved for the Paris & Mount Pleasant R. R. will be used for repairs and maintenance of the line. No extensions. R. W. Wortham is receiver.

Tex., San Antonio.—Sumner-Sollitt Co., Pullman Bldg., Chicago, Ill., have contract to build 4.4 mi. of tracks to serve the San Antonio general supply depot of the U. S. Army, Fort Sam Houston. Connection with trunk line railroads.

Tex., Wayland.—Ringling, Eastland & Gulf Railroad has let contract to Maney Bros. & Co. of Oklahoma City, Okla., for grading 3½-mi. extension from Wayland to Breckwalker. C. H. Chamberlin is Ch. Engr. at Eastland, Tex.

W. Va., Morgantown.—Gustin Run Northern Railway Co. chartered with \$25,000 capital stock to build line several miles long from Gustin Run Dist., near Morgantown, to Bowlby. W. Va. Incorporators, R. M. Davis, Ernest H. Gilbert, D. E. Casto, J. E. Lyons and Mabel Wilson, all of Morgantown.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Machine Tools to Be Sold.

It is announced that a sale of standard machine tools and equipment, by order of the United States Army, Ordnance Department, Chicago District Salvage Board, will take place Thursday, September 9, at 11 A. M. (daylight saving time), at the storage depot, 74th St. and Ashland Ave., Chicago, Ill. The sale, it is stated, comprises about 500 modern machine tools, most of them in excellent shape and many of them new, and, with very few exceptions, they are all standard. The lot may be examined the day next before the date of sale between 9 A. M. and 5 P. M. Samuel T. Freeman & Co., auctioneers, 1519-21 Chestnut St., Philadelphia, Pa., who will conduct the sale, will send catalogues on request. Particulars will be found in the formal notice in another column.

Describing New Products.

The Newman Manufacturing Co., 717-719 Sycamore St., Cincinnati, Ohio, has just issued Folder M, which describes several attachments for engine lathes, a new hand vise, a knurling tool and a changeable drill head. In other words, there are a variety of speed tools which can be employed by machine shops and manufacturers who are anxious to increase production without purchasing new equipment. This folder will be sent free to all who may be interested.

Street Lighting by Electricity.

The latest developments and recommendations for street, boulevard and parkway lighting in the "White Way" manner are interestingly described and illustrated in Bulletin 43503-B, issued by the General Electric Co. to supersede No. 43503-A. The new styles of standards and diffusing, rippled and stippled globes, with metal or glass canopies, are exceedingly artistic. The style in decorative lighting now tends more toward slender and unobtrusive poles and globes of fine, graceful design, and a number of general suggestions are offered. Clusters of lamps are being succeeded by single lights since the development of new high candle-power lamps. Two other bulletins have also been issued by this company, 41021-A, concerning the RF adjustable speed motors, and 46112, concerning the deflection potentiometer.

Tile for Flooring.

The National Mosaic Tile Co., Mobile, Ala., exclusive manufacturers of a hydraulic-pressed mosaic cement flooring tile known as "Adamantile" and who have been in this business for 14 years, report that they are not suffering from lack of raw materials, but are able to keep their plant going and ahead

of their orders by from 300,000 to 500,000 feet of their product at all times. The advantage which they enjoy is said to be due largely to their location at the mouth of the Alabama-Warrior River waterway system, which insures transportation facilities all the year 'round without interruption. Immediately north of Mobile is the plant of the Gulf States Portland Cement Co., from which they are able to obtain cement in large supply, and this fact, together with superior manufacturing capacity, enables the tile company to keep pace with orders for its output, besides having a reserve capacity to take care of emergencies in the way of unexpected demands. The company has gotten out a fine catalogue, displaying the different kinds of "Adamantile," in colors, showing them just as they look when finished and laid.

Opened Another Office.

The American Appraisal Co. of Milwaukee, Wis., announce that they have opened an office in Baltimore, Md., the location being 533 Title Bldg., and the representative A. M. Isaacson, who has represented them in this territory for many years.

Manager Appointed.

Major Richard W. Agler has been appointed manager of the Southern department of the H. K. Ferguson Company of Cleveland, O., and his headquarters are at 815 Austell Bldg., Atlanta, Ga. Before the war he practiced architectural engineering at Chattanooga, Tenn. He resigned from the army last March to become assistant chief engineer of the Ferguson Company. Richard E. J. Summers succeeds him as assistant chief engineer, having been structural engineer. Mr. Summers was in the army as a first lieutenant of engineers.

Five New Offices.

The Pennsylvania Pump & Compressor Co. of Easton, Pa., announces the opening of additional sales offices as follows: Buffalo, N. Y., 788 Potomac Ave., J. B. Laird, manager; Cleveland, Ohio, 232 St. Clair Ave. N. E., L. J. Wakefield; St. Louis, Mo., 1956 N. Broadway, Corby Supply Co.; Minneapolis, Minn., 423 5th St. S., L. E. Pollard Co.; Omaha, Neb., 804 First National Bank Bldg., L. E. Pollard Co.

Reducing Accidents and Gaining Efficiency.

An innovation in providing for the safety of workmen on building and construction work has been introduced in the erection of large extensions to the plant of the American Rolling Mill Co. at Middletown, Ohio. At

2 P. M. each Tuesday a committee of foremen, mechanics and laborers inspects the entire job from sewers to roof for the sole purpose of seeing that proper methods are taken to safeguard the employes against accident. This committee makes a report and recommendations which are put into effect by a safety committee. The plan was introduced and is being carried out by Dwight P. Robinson & Co., Inc., a large engineering and construction organization which has been making careful investigations of various plants for protecting its employes. The success of this program is being closely watched by various safety societies, which are now encouraging day laborers as well as trained men to speed up their work. Experts in all types of building construction are agreed that the first marked reduction in building cost will come through increased production.

Appointment.

G. Bronson Philhower, Jr., is now with the Reading Iron Co. in its railroad sales department as salesman, with headquarters at the New York office, 99 John St. Mr. Philhower had extensive training in related fields, and this sales experience was supplemented by an intensive course of training in the various plants of the Reading Iron Co.

Trade Literature.

Interesting Hydro-Electric Bulletin.

"Hydro-Electric Developments" is a very handsomely prepared bulletin, showing in part the work of the organization of Charles T. Main, designing, consulting and supervising engineer for water-power projects, 201 Devonshire St., Boston, Mass. It comprises work from small plants to those of the first magnitude, the results of thirty years' experience in this line of endeavor. Photographic reproductions displaying construction accomplished are presented in the book, accompanied by brief descriptions of the plants or of special features concerning them. Some of this work was done in the South, the rest of it in New England and New York, and much in Montana. The whole publication is attractively arranged and its contents are full of interest.

Valuable Information on Road Work.

"Reducing the Guess in Road Work" is a booklet published by the Lakewood Engineering Co., Cleveland, O. In its forty-eight pages is a mine of information under chapter titles covering "What Lakewood Has Done to Improve Road-Building Methods, Better Concrete Roads, Speeding Up Road Building, Reducing Costs, the Labor Problem, Contingencies, Inspection Problems Solved, and Lakewood Road Plant." The company has offices in 19 cities. A copy of the booklet will be sent on request to anyone who is interested.

Electric Drills.

A new circular, just off the press and descriptive of the "Thor" Universal electric drills, has been issued by the Independent Pneumatic Tool Co., Chicago. The picture on the front page shows a size "00" drill equipped with a new pistol-grip handle at work on a motortruck frame. These drills are operated on alternating or direct current, 110 or 220 volts, and the circular, which is No. 33, contains illustrations of the different sizes and styles. There is also a table of specifications, besides much other information.

(Continued on Page 148)

E H year the Chemical Industries Exposition has recovered plants that were about to go the way of obsolescence.

They have become modern and progressive—

They have then drawn the best and most intelligent workmen in their vicinity, for labor is more easily attracted by an up-to-date plant and labor-saving machinery with better income through increased production.

Give your plant the opportunity of invigoration by what you will learn and secure at this greatest world's Industrial Exposition.

Bring your Works Manager, Superintendents and Department Heads with you.

Opens Monday, Sept. 20th

Closes Saturday, Sept. 25th

Grand Central Palace, New York

*The Clearing House
for Greater Production,
Progress and Prosperity*



Financial News

New Financial Corporations.

Ala., Albertville.—Albertville National Bank, conversion of Bank of Albertville, capital \$100,000, is chartered. Hogan Jackson, Prest.; C. J. Walker, Cash.

Ala., Bessemer.—National Bank of Commerce, capital \$100,000, has applied for charter. G. H. Stevenson and others.

Ala., Georgiana.—Bank of Georgiana, capital stock \$25,000, is chartered, to begin business in October. John C. McGowan, Prest.; O. H. Warren and H. K. Tippen, V.-P.s; J. H. Morgan, Cash.

Ala., Selma.—City Savings Bank, capital stock \$100,000, is incorporated to begin busi-

ness Nov. 1. H. C. Armstrong, L. M. Hooper, W. S. Monk, H. I. Shelley and others.

Fla., Haines City.—Growers' Commercial Bank, capital stock \$30,000, has begun business. Thos. H. Atkin, Prest.; C. G. Oats, Cash.

Fla., Homestead.—Citizens' Bank, capital stock \$25,000, is incorporated. A. C. Graw, Prest.; W. J. Carter and S. A. King, V.-P.s; E. N. Gause, Cash.

Fla., St. Petersburg.—A mortgage or trust company is reported being organized to engage in building operations with \$100,000 capital stock. Temporary officers, Herman Dann, Chrmn.; Chas. R. Carter, Secy. E. C. Reed, chairman committee on organization.

Ky., Manchester.—First State Bank, capital \$20,000, has begun business. Dan Baker, Prest.; Levi Hensley, V.-P., and T. H. Bowling, Cash.

Ky., Winchester.—Winchester Bank, capital \$100,000, is inceptd. N. H. Witherspoon, Jas. W. Hunt, R. N. Ratliff and others.

La., Lafayette.—Union Bank & Trust Co., capital \$50,000, is chartered. R. O. Young, Youngsville; P. Krauss, P. R. Landry, P. Rodolph and others.

Md., Baltimore.—Metropolis Building Assn., capital \$1,300,000, is incorporated. Geo. L. Radcliffe, Prest.; Charles A. Gettier, V.-P.; Philander B. Briscoe, Secy. and Atty.; N. E. Stubbs, Treas.

N. C., East Spencer.—W. J. Hatley, postmaster, and other citizens are reported to have organized a bank.

N. C., King.—Farmers and Merchants' Bank, capital \$25,000, is inceptd. to begin busi-

(Continued on Page 150)

BONDS PURCHASED MUNICIPAL AND CORPORATION

Correspondence invited from officers of Municipalities and from well-established industrial corporations contemplating new financing.

HORNBLOWER & WEEKS

Established 1888

INVESTMENT SECURITIES

42 BROADWAY NEW YORK

BOSTON CHICAGO PROVIDENCE PORTLAND, ME. DETROIT

We Finance

Electric Power and Light Enterprises with Records
of Established Earnings

We Offer

Bankers and Investment Dealers
Proven Power and Light Securities

Correspondence Solicited

ELECTRIC BOND & SHARE CO.

(Paid-up Capital and Surplus, \$24,000,000)

71 Broadway

New York



This 7% Miller Mortgage Bond Paid Investors 12%.

While Miller Mortgage Bonds always net investors at least 7 per cent., they frequently pay a premium in addition. For instance, when an outstanding issue of Hill Building Bonds were recently retired in advance of maturity, the holders received a premium of 5 per cent.

Readers of the *Manufacturers Record* are familiar with the progress and development which has been going on in the South for the past decade. This situation is attracting in larger amounts the funds of institutions which invest in the best class of mortgages. As such funds are offered at comparatively low interest rates, there is an increasing tendency on the part of our borrowers to prepay their loans, for which privilege they pay a premium to our investment clients.

To interested investors we would like to send a circular relating the history of the Hill Building Bonds and also descriptive circulars of current offerings which yield 7 per cent. with the possibility of an additional premium.

G.L. MILLER & COMPANY, Inc.
1430 HURT BUILDING, ATLANTA, GA.

THE OFFICERS AND DIRECTORS OF

Southern Textile Exposition, Inc.

desire to express their appreciation of the many applications for space which have been received for the

FOURTH EXPOSITION AT GREENVILLE, S. C.
OCTOBER 18th to 23rd

Except on the mezzanine and balcony floors all of the space has been sold. For instance, every loom manufacturer in the United States will be represented.

Greenville will accommodate all visitors comfortably in private homes when the hotels overflow. Application for these reservations should be made as early as possible.

Greenville Association of Commerce will arrange entertainments complimentary to Southern Textile Association and the Exhibitors.

You are cordially invited to be present.



Capital and Surplus
\$4,000,000

Total Resources
\$38,000,000

Large enough to handle your biggest
problems, but not too large to be
interested in your smaller ones.

**MERCHANTS-MECHANICS
FIRST NATIONAL BANK
OF BALTIMORE**

**LOANS MADE TO
STATES, CITIES, COUNTIES, ETC.**

Also Entire Issues of Bonds of
Successful Industrials Purchased

Largest Capital and Surplus of Any Financial
Institution in Maryland or any Southern State

Established 1884

Resources \$21,000,000

**Mercantile Trust and Deposit Co.
OF BALTIMORE**

A. H. S. POST, President. F. G. BOYCE, JR., Vice-President.

**MARYLAND TRUST COMPANY
BALTIMORE**

Transacts a General Trust and Banking Business

Correspondence and interviews invited

CAPITAL. - \$1,000,000

**The National Exchange Bank
OF BALTIMORE, MD.**

Capital, \$1,500,000

Surplus, \$1,000,000

W. L. SLAYTON & CO.

Dealers in—

City
County
Township

BONDS

Road
School
Drainage

TOLEDO, O.

We buy Municipal Securities from Contractors subject to
their being awarded contract involving the issue. Write our
nearest office before bidding for Municipal work.

Buying Offices at Birmingham, Ala.; New Orleans, La.; Dallas, Tex.; Tampa, Fla.

**DELAWARE CORPORATIONS
DIGEST OF LAW**

(7th ED.) FREE ON REQUEST

STOCK WITHOUT PAR VALUE, if desired.

The most modern and scientific method of corporate organization

CORPORATIONS ORGANIZED AND REPRESENTED.

22 Years' Experience

Corporation Company of Delaware
Equitable Building, Wilmington, Del.

FOR INFORMATION ABOUT

BIRMINGHAM REAL ESTATE

and INVESTMENT OPENINGS, write

JEMISON

REAL ESTATE & INSURANCE COMPANY
BIRMINGHAM, ALA.

**We Finance
MUNICIPALITIES AND HIGH GRADE
INDUSTRIAL COMPANIES**

Correspondence Invited

Lawrence Chamberlain & Company

115 Broadway

(Incorporated)

New York

BOOST PRODUCTION

Add 20 per cent. to speed by equipping your stenographic
department with

REID COPYHOLDERS

A. B. REID & COMPANY

223 Grand Ave., W.

Detroit, Mich.

ELSTON & COMPANY

71 W. Monroe St.

CHICAGO

**COUNTY, CITY, SCHOOL, ROAD
BONDS—WANTED**

NOTICE

the representative engineering organizations
carrying cards in our Professional Advertising
Department. The MANUFACTURERS RECORD
goes to the people you want to reach.

APPRAISALS

Lumber and Woodworking Plants
Industrial Buildings and Residences

JAMES McANDREW

P. O. Box 1402

Savannah, Ga.

YOUNG & SELDEN COMPANY

MANUFACTURING

Bank and Commercial Stationers

BALTIMORE, MD.

ness Oct. 1. J. T. Smith, Prest.; J. L. Christian, V.-P.; W. E. Hartman, Secy. and Treas. Tenn., Johnson City.—Tennessee National Bank, capital \$200,000, has applied for charter. B. W. Horner and others.

Tex., Damon.—Guaranty State Bank of Damon, capital stock \$20,000, chartered. J. L. Bryan, Prest.; W. P. Mulcahy, Cash.

Tex., Roscoe.—Farmers' State Bank of Roscoe, capital stock \$25,000, chartered. S. F. Nooley, Prest.; S. P. Smith, Cash.

Tex., Vickery.—Citizens' Bank will open for business Aug. 21. Geo. W. Riddle of Dallas, Prest.; Fred Shuster of Farmers Branch, Cashier.

Va., Doswell.—Doswell State Bank, capital \$25,000, is chartered. J. A. Wright, Prest.; D. E. Campbell, Secy., and J. S. Allen, incorporators.

Va., Mathews.—Farmers and Fishermen's Bank, capital \$50,000, is chartered. Fred L. Joslyn, Prest.; Cobbs Creek; Joseph E. Healy, Secy.

Va., Roanoke.—Colonial National Bank, conversion of Colonial Bank & Trust Co., capital \$400,000, is chartered. R. H. Angell, Prest.; E. W. Tinsley, Cash.

New Securities.

Ark., Charleston.—(School).—Bids received any time for \$9000 of 6 per cent \$500 denomination bonds, dated Nov. 1 and voted May, 1920. Address J. S. Smith, Chrmn. School Comms.

Fla., Green Cove Springs.—(Drainage).—Bids will be received, it is reported, until noon Sept. 6 for \$100,000 of 6 per cent 10-29-yr. serial bonds of Clay County. Address L. T. Ivey, Clk. County Comms.

Fla., Pensacola.—(School).—\$500,000 bonds voted July 27 by Pensacola Special Tax School Dist. No. 16 of Escambia County are 6 per cent \$1000 denomination serial, dated Jan. 1, 1921. Jas. Macgibbon is Clk. Circuit Court.

Fla., Sanford.—(School).—Election Sept. 6 on \$15,000 of 6 per cent 30-year bonds of Special Tax School Dist. No. 5, Seminole County, dated Jan. 1, 1921. Address C. F. Harrison, Chairman County Board Public Instruction.

Ga., Cuthbert.—(School).—Election Sept. 7, it is reported, on \$65,000 of 5½ per cent \$1000 denomination 24-yr. serial bonds dated Jan. 1, 1921. Address Eugene Sharley, City Clk.

Ga., Gainesville.—(Road).—Bids received until 10 A. M. Aug. 23 for \$60,000 of 5 per cent Hall County bonds. Address F. T. Davies, Chrmn. Board Comms.

Ga., Midville.—(School).—Election Sept. 11, it is reported, on \$80,000 of 6 per cent \$1000 denomination bonds of Midville Dist., Burke County. Address T. H. Wall, Chrmn. School Board.

Ga., Waynesville.—(School).—\$7500 bonds of Waynesville Dist., Wayne County, reported voted. Denomination \$500. Address D. B. Purcell, Secy. County Board of Education, Jesup, Ga.

Ky., Bardwell.—(Road).—An election will be held in November on Carlisle County bonds. Address County Comms.

Ky., Carrollton.—(Water, Light, Funding).—Election Nov. 2 on \$12,000 water and light and \$22,000 funding bonds. Address J. E. Guillon, Mayor.

La., Monroe.—(Improvement, Water, Sewer).—Bids will be received until noon Sept. 6 for the following 6 per cent bonds: \$100,000 9½-year average improvement and \$56,000 24½-year average water and sewer bonds. Address J. H. Boyte, City Clk.

Md., Chestertown.—(School).—Bid: will be received until noon, Sept. 14 for \$17,000 of not

exceeding 5 per cent \$1000 denomination Kent County bonds, dated Aug. 1, 1920. Address G. H. Cannan, Prest. Board County Comms.

Md., Hagerstown.—(School, Road).—Sold to the Fidelity Trust Co., the Mercantile Trust & Deposit Co., Nelson, Cook & Co., Baker, Watts & Co., and Townsend Scott & Sons, all of Baltimore, at 93.57, \$490,000 of 5 per cent Washington County bonds offered Aug. 18.

Md., Rockville.—(Road).—Sold to Alexander Brown & Sons of Baltimore, and Harris, Forbes & Co. of New York, bidding jointly, \$60,000 of 5 per cent serial 1920-1950 Montgomery County bonds, dated Aug. 1.

Miss., Louisville.—(School).—Election Aug. 23 on \$6000 of Ellison Ridge Consolidated School Dist., Wilson County, bonds. Address J. W. Gully, Election Commissioner.

Miss., Louisville.—(Light Plant).—Election Aug. 31 on \$36,000 of bonds. Address J. B. Parkes, Com. Election.

Miss., Meridian.—(Road).—\$120,000 Lauderdale County road bonds reported sold to First National Bank of Meridian.

Miss., Meridian.—(Street Paving and Repairs, Bridge, Incinerator).—\$230,000 of 6 per cent city bonds offered July 20 without result have been sold to banks in Meridian at par and accrued interest thus: \$125,000 paving, \$90,000 street repair, \$60,000 bridge, \$15,000 incinerator. W. H. White is City Clk.

Miss., Natchez.—(School).—Contemplated to issue not exceeding \$10,000 of Washington Dist., Adams County, bonds. Address School Board.

Miss., Paulding.—(Road).—Election Sept. 9 on \$125,000 of Jasper County Road Dist. No. 5 bonds. Address Board of Supvrs.

Miss., West.—(School).—Election Sept. 6 on \$15,000 bonds. Address School Board.

Mo., Butler.—(Light, Water).—\$65,000 of city bonds voted Aug. 10 will be 5-20s to rebuild light and water plant. Date of interest, etc., not decided. Address City Clk. Jas. T. Hull is Mayor.

Mo., Jefferson City.—(Funding).—Election Aug. 24 on \$22,000 of not exceeding 6 per cent 20-year serial bonds. Address Joe P. Nacy, City Clerk.

Mo., Springfield.—(Road).—Election Sept. 6 on \$14,500 of bonds of Galloway Bridge Public Road Dist. Address County Comms.

N. C., Reidsville.—(School).—A bill is reported passed by the State Senate to authorize \$300,000 bonds for schools as needed. Address School Board.

N. C., Vanceboro.—(Street).—Bids will be received until Sept. 20 for \$23,000 of 6 per cent 20-yr. \$1000 denomination bonds. Address H. E. Barrow, Town Treas. For particulars see *Proposals Department*.

N. C., Wilson.—(Light).—Bids will be received until 8 P. M. Sept. 9 for \$110,000 of 6 per cent \$1000 denomination serial 1921-1938 bonds. Address Theo. A. Hinnant, Town Clk.

Okla., Oklahoma City.—(Paving).—Contemplated to issue \$62,889.81 of bonds. Address The Mayor.

S. C., Abbeville.—(Paving).—\$58,338 of city paving certificates reported sold to banks in Abbeville.

S. C., Bamberg.—(Water and Light).—Sold to C. T. Frick, Columbia, \$40,000 of 6 per cent bonds, voted July 15.

S. C., Charleston.—(School).—\$25,000 bonds will be issued, it is reported, for new school at Chicora Place. Address H. H. McCarley, County Supt. of Education.

S. C., Chester.—(School).—Bids will be received until noon Sept. 10 for \$25,000 of 6 per cent \$500 denomination 10-20-yr. bonds of School Dist. No. 1, Chester County, dated Aug. 1, 1920. Address J. C. McLure, Secy.

School Dist. For particulars see *Proposals Department*.

S. C., Columbia.—(School).—Sold to C. T. Frick, for the Carolina Bond & Mortgage Co. of Columbia, \$50,000 of 6 per cent 20-year bonds of Olympia School Dist., Richland County.

S. C., Greenville.—(Hospital, Street, Water, Fire).—Steps are being taken to obtain a legal opinion as to the \$100,000 issue of 5 per cent city bonds voted Aug. 3 (before offering them for sale) covering \$150,000 hospital, \$100,000 street, \$100,000 water, \$50,000 fire equipment. H. C. Harvley is Mayor.

Tenn., Columbia.—(School).—\$10,000 of Maury County bonds have been voted. Address County Superintendent Graham.

Tenn., Knoxville.—(Funding, Viaduct, School).—\$2,000,000 of not exceeding 5½ per cent bonds have been authorized by the Legislature. Address Mayor E. W. Neal.

Tenn., Shelbyville.—(Road).—Bids will be received until noon, Aug. 27 for \$200,000 of 6 per cent \$1000 denomination 20-year bonds of Bedford County. Address W. G. Rucker, County Judge.

Tenn., Smithville.—(Light, Power).—No sale of the \$30,000 of 6 per cent 20-yr. \$1000 denomination city bonds offered Aug. 14, it appears, on account of lack of time for bond buyers to prepare bids after notice of sale. Address Eugene Hendon, Mayor. Bonds were voted June 26 and dated Aug. 1, 1920.

Tex., Belton.—(Sewer, Water, Park).—\$100,000 of city bonds were voted Aug. 17. Address The Mayor.

Tex., Clarksville.—(Road).—This, Red River, County is reported to have \$205,000 of road bonds, covering seven districts, yet unsold. Address County Comms.

Tex., Greenville.—(Street).—No sale was made of the \$500,000 (part of \$450,000 issue voted July 5) of 5 per cent \$500 denomination 40-yr. serial city bonds offered Aug. 17. Dated Sept. 1 1920. Address J. O. Willman, City Clk.

Tex., Kerrville.—(Road).—\$300,000 of 5½ per cent serial Kerr County Road Dist. No. 1 bonds have been approved by the Attorney-General. Address County Comms.

Tex., Kountze.—(Road).—\$11,000 of 5 per cent 20-40-yr. optional Hartin County Road Dist. No. 1 bonds have been approved by the Attorney-General. Address County Comms.

Tex., Lubbock.—(Paving).—\$110,000 of bonds have been sold at 90.

Tex., Marlin.—(Road).—Bids received any time for \$500,000 of 5 per cent, \$1000 denomination, 10-year optional bonds of Justice Precinct No. 1, Falls County, dated Sept. 1, 1919. Address E. M. Dodson, County Judge.

Va., Damascus.—(School).—Voted Aug. 10, \$25,000 of bonds. Address School Board.

W. Va., Smithfield.—(Street).—Election Aug. 21 on \$15,000 of bonds. Address The Mayor.

Financial Notes.

First National Bank of Kinston, N. C., has increased capital stock from \$100,000 to \$250,000.

Farmers & Merchants' National Bank of Abilene, Tex., has increased capital stock from \$100,000 to \$200,000.

Fidelity Trust Co. of Knoxville, Tenn., has increased capital stock from \$200,000 to \$500,000.

An abstract of reports of the condition of State banks in Virginia, as of June 30, shows total resources of \$201,569,262 for 323 banks, including loans and discounts of \$148,971,937. Total deposits were \$141,970,313. Total resources reported June 30 of last year (295 banks) were \$177,814,143.

PROPOSALS

BOND ISSUES BUILDINGS PAVING GOOD ROADS

Bids close September 7, 1920.

PROPOSALS FOR COKE, PIG LEAD. Window Glass, Fire Brick, Chamols Skins, Leather Belting, Harness Leather, Typewriter Stands, Gold Leaf, Acetone, Oxalic Acid, Ethyl Alcohol, Lime, Lye, Soda Ash, Bicarbonate of Soda, Caustic Soda, Lard Oil, Soap, Soap Polish, Benzine, Kerosene, Gas-engine Oil, Turpentine Substitute, Ferro-titanium, Aluminum Paint, Asphaltum, Bituminous Solution, Locomotive Black, Drop Black, Prussian Blue, Metallic Brown, Paint Drier, Enamel, Lampblack, Red Lead, White Lead, Litharge, Ocher, Linseed Oil, Putty, Rosin, Shellac, Sienna, Turpentine, Zinc, Blank Books, Note Books, Record Books, Paper Napkins, Index Cards, Bond Paper, Adding Machine Paper, Toilet Paper, Asphalt Prepared Roofing and Wool Waste. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. September 7, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1400) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close September 9, 1920.

PROPOSALS FOR BENCH GRINDER. Pneumatic Hoist, Ice-cutting Machine, Motors, Oil Filter, Platform Scales, Copper Cable, Heater Cord, Lamp Cord, Copper Wire, Eyebolts, Brick and Stone Drills, Cable Clips, Brass Grommets, Foundry Nails, Chain Shackles, Mule Shoes, Pipe Straps, Pipe Turnbuckles, Pressure Gauges, Port-hole Glasses, Stepladders, Door Locks, Oars, Sextants, Wagon Spokes, Fire Extinguishers, Hose Nozzles, Automobile Bells, Annunciators, Sockets, Varnished Tape, Cable Terminals, Poultry Netting, Copper Screening, Multilux Bowls, Glass Shades, Rattan Brooms, Brushes, Rubber Hose, Cocoa Fiber Mats, Emery Cloth, Chinaware, Flags, Canvas, Mattress Ticking, Towels, Toweling, Napkins, Bed Sheets, Bed Spreads, Thread and Twine. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. September 9, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1401) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close September 22, 1920.

PROPOSALS FOR DIESEL OIL. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. September 22, 1920, at which time they will be opened in public, for furnishing the above-mentioned article. Blanks and information relating to this Circular (1404) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close September 4, 1920.

PROPOSALS FOR ANGLE SPICE BARS. Staybolt Iron, Spring Steel, Horseshoes, Mule Shoes, Kedge Anchors, Priming Cups, Water Gauges, Steel Rope, Bronze Rope, Copper Wire, Lead Wire, Brass Wire, Copper Wire Cloth, Snatch Blocks, Sandpaper, Rubber Cement, Valve-grinding Compound, Motorboat Hand Horns, Tire Pumps, Rubber Tires and Tubes, Aluminumware, Chinese Strainers, Wheat Bran and Graphite. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock

A. M. September 4, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1402) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close September 13, 1920.

PROPOSALS FOR STEEL BRONZE Worms, Steel Rope, Copper Wire, Steel Wire, Ignition Cable, Snatch Blocks, Tackle Blocks, Marine Clocks, Compression Cups, Dinner Forks, Pliers, Mirrors, Plate Glass, Baggage Trucks, Leather, Artificial Leather, Cheesecloth, Celluloid, Rubber Fabric, Automobile and Bicycle Tires and Tubes, Metal Polish, Pins, Typewriter Ribbons, Bond Paper and Pressboard. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. September 13, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1403) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close September 15, 1920.

U. S. ENGINEER OFFICE, Jacksonville, Fla. Sealed proposals will be received here until 12 M. September 15, 1920, and then opened, for constructing and delivering pontoon catamarans for the dredge "Maj. J. C. Mallory." Information on application.

Bids close September 15, 1920.

U. S. ENGINEER OFFICE, Jacksonville, Fla. Sealed proposals will be received here until 12 M. September 15, 1920, and then opened, for jetty construction at entrance to St. Johns River, Fla. Information on application.

Bids close September 7, 1920.

OFFICE OF THE CONSTRUCTING QUARTERMASTER, Savannah Proving Ground, Savannah, Illinois. Sealed proposals will be opened at this office on September 7, 1920, at 11 o'clock A. M., for construction of 47 ordnance storage magazine buildings, 30 standard magazines for high explosives, barrack buildings, re-packing-houses, stables, fencing, etc., together with utilities. Plans and specifications may be had upon application to this office or the Office First District, Construction Service, War Trades Building, Washington, D. C. Contractors submitting proposals should visit the site.

Bids close September 20, 1920.

\$23,000 6% Street Bonds

Vanceboro, N. C. Bids will be opened September 20 for \$23,000 of 6 per cent. town bonds, 20-year maximum, \$1000 denomination maximum. Address H. E. BARROW, Town Treasurer.

Bids close September 10, 1920.

\$25,000 6% School Bonds

Chester, S. C. Bids will be received until noon September 10, 1920, at office of T. H. White, Chairman, Chester, S. C., for all or any part of an issue of \$25,000 School-Improvement Bonds of School District No. 1 of Chester County, South Carolina. Bonds of denomination of \$500 each, dated August 1, 1920; due twenty years after date; redeemable after ten years from date; interest 6 per cent., payable February 1 and August 1 of each year; principal and interest payable at office of County Treasurer in Chester, S. C. Cashier's or certified check for 1 per cent. of par value of bonds bid for must accompany bid. Right to reject any or all bids and to waive any

irregularity reserved. Bonds are tax exempt in South Carolina. For further information address

J. C. McLURE, Secretary,
Chester, S. C.

Bids close August 31, 1920.

\$30,000 6% Courthouse and Jail Bonds

McCormick, S. C. Sealed bids will be received by the Town Council of the Town of McCormick, South Carolina, until 12:30 o'clock P. M. August 31, 1920, on Thirty Thousand Dollars Six Per Cent. Courthouse and Jail Buildings Bonds for McCormick County, at which time said bids will be opened. The bonds to be dated September 1, 1920; to be in denomination of Five Hundred Dollars, and to be due and payable in accordance with following schedule:

November 1, 1921.....	\$1,000.00
November 1, 1922.....	1,000.00
November 1, 1923.....	1,000.00
November 1, 1924.....	1,000.00
November 1, 1925.....	1,000.00
November 1, 1926.....	1,000.00
November 1, 1927.....	1,500.00
November 1, 1928.....	1,500.00
November 1, 1929.....	1,500.00
November 1, 1930.....	1,500.00
November 1, 1931.....	1,500.00
November 1, 1932.....	1,500.00
November 1, 1933.....	1,500.00
November 1, 1934.....	1,500.00
November 1, 1935.....	2,000.00
November 1, 1936.....	2,000.00
November 1, 1937.....	2,000.00
November 1, 1938.....	2,000.00
November 1, 1939.....	2,000.00
November 1, 1940.....	2,000.00

Interest at 6 per cent. per annum on said bonds to be due and payable semi-annually on the first days of May and November of each year.

A certified check of \$500, payable to T. L. Edmunds, Secretary and Treasurer of Town Council, Town of McCormick, is required deposited with sealed bid.

For further information in regard to these bonds address all communications, as well as bids, to T. L. Edmunds, Secretary and Treasurer of Town Council of Town of McCormick.

T. L. EDMUNDS,
Secy. and Treas. Town Council,
Town of McCormick,
South Carolina.

August 4, 1920.

Bids close September 1, 1920.

Manhole, Sewer Inlet, Etc.

DEPARTMENT OF PUBLIC IMPROVEMENTS,
SUB-DEPARTMENT OF HIGHWAYS
ENGINEER.

Baltimore, Md., August 18, 1920. Sealed proposals, executed in duplicate and addressed to the Board of Awards, care of the City Register, will be received by him at his office until 11 o'clock A. M. Wednesday, September 1, 1920, for furnishing and delivering Manhole, Sewer Inlet and similar Iron Castings to the Highways Engineer's Department at the Franklin Street Storage Yards, near the Calverton Road, or to any of the other storage yards of the Highways Engineer, f. o. b. cars or trucks storage yards.

Specifications and blank proposal sheets will be furnished upon application at this office, City Hall.

A certified check of the bidder on a clearing-house bank, drawn to the order of the Mayor and City Council of Baltimore, in the amounts recited in the specifications must accompany each bid.

The Board of Awards reserves the right to reject any and all bids.

H. G. FERRING,
Chief Engineer,
A. C. CHRISTILF,
Highways Engineer.

Approved: WM. F. BROENING,
President Board of Awards.

Approved: FRANK DRISCOLL,
Assistant City Solicitor.

Bids close September 3, 1920.

Topsoil RoadSOUTH CAROLINA STATE HIGHWAY
DEPARTMENT.
PROJECT No. 92—UNION COUNTY,
Union, S. C.

Notice is hereby given that sealed proposals for the construction of 5.327 miles of roadway in Union County between Buffalo Mills and Spartanburg county line will be received at the office of W. B. Deneen, Courthouse, Union, S. C., until 12 o'clock noon September 3, 1920, and then publicly opened.

The work to be done consists of approximately

- 1.25 acres Clearing and Grubbing.
- 300.00 cubic yards Rock Excavation.
- 23,062.20 cubic yards Earth Excavation (excluding that at bridges).
- 16,810.27 cubic yards Topsoil Surfacing compacted.
- 21,853.00 cubic yards Stas. Overhaul on Surfacing.
- 55.96 cubic yards Class "B" Concrete in Endwalls.

All necessary Pipe Culverts.
Detailed plans of the work may be seen at the office of W. B. Deneen, Courthouse, Union, S. C.; the office of L. M. Weisiger, Division Engineer, Laurens, S. C.; or the office of the State Highway Engineer, Columbia, S. C. A complete set of plans and specifications may be obtained from the latter upon payment of \$5, which sum will be refunded if the plans are returned in good condition within thirty days.

A certified check for Five Hundred Dollars (\$500), made payable to the Secretary of Bogansville Township Highway Commission, must accompany each proposal.

Proposal forms may be secured from W. B. Deneen, Union, S. C., or State Highway Department, Columbia, S. C.

The right is reserved to reject any or all bids and waive all technicalities.

CHAS. H. MOOREFIELD,
State Highway Engineer.

Bids close September 17, 1920.

Top-Soil Road

Rome, Ga.
Sealed proposals will be received by the Board of Commissioners of Roads and Revenues of Floyd County, Georgia, at the office of the said Board at the Courthouse at Rome, Georgia, at 12 o'clock noon on the 17th day of September, 1920, for the furnishing of all labor, material, equipment and other necessities, for the construction of Federal-aid Project No. 151, consisting of 7.3 miles of topsoil surfaced road. The said road is that portion of the Rome-Cedartown Highway between Lindale and the Polk County line.

The work will consist of preparation of old roadway, grading, construction of side ditches, shoulders, drainage structures and a topsoil surfaced roadway.
All borrow and topsoil pits will be provided by Floyd County without cost to the contractor.

- The approximate quantities are as follows:
1. Clearing and grubbing, 4.39 acres.
 2. Common excavation, 38,950.0 cu. yds.
 3. Borrow excavation, 7621.9 cu. yds.
 4. Solid-rock excavation, 1178.4 cu. yds.
 5. Overhaul on excavation, 4106.0 sta. yds.
- CONCRETE BRIDGES AND CULVERTS.
6. Class "A" concrete, 48.41 cu. yds.
 7. Class "B" concrete, 203.23 cu. yds.
 8. Class "C" concrete, 42.80 cu. yds.
 9. Reinforcing steel, 5283 pounds.

PIPE CULVERTS.

10. 15-inch diameter pipe, 980 linear feet.
11. 18-inch diameter pipe, 420 linear feet.
12. 24-inch diameter pipe, 326 linear feet.
13. 30-inch diameter pipe, 30 linear feet.
14. Cement-concrete headwalls, 111.34 cubic yards.

ROADWAY SURFACING.

15. Topsoil surfacing, 17,122.5 cubic yards.
16. From Sta. 676x00 to Sta. 729x77.5 the old road is hardsurfaced. This surface is to be scarified, raked and reshaped. The shoulders are to be fressed and side ditches cleaned. Floyd County will furnish scarifier and roller for this work.

The said work shall begin on or about the 1st day of October, 1920, and shall be completed on or before the 1st day of August, 1921. Plans and specifications are on file at the office of the Board of Commissioners at Rome, Georgia; at the office of the Seventh Road District of Rome, Ga., and at the office of the State Highway Engineer, Atlanta, Georgia. Plans may be purchased from any of the above-mentioned offices for \$10.

Said work will be paid for as same progresses, to wit: \$5 per cent. of the amount due at the end of each calendar month will be paid between the 10th and 15th of the suc-

ceeding month, and the remainder shall be paid within 30 days of final completion and acceptance.

Proposals must be submitted on forms which will be supplied by the undersigned, and must be accompanied by a certified check or bidder's bond for 5 per cent. of the amount bid.

Bond, as required by the Georgia law, will be required of the successful bidder.
Right is reserved to reject any or all bids and to waive all formalities.

This the 21st day of August, 1920.
By BOARD OF COMMISSIONERS OF
ROADS AND REVENUES.
Signed P. H. VANDIVER,
Chairman.

Bids close August 31, 1920.

State HighwaysSTATE OF MARYLAND.
STATE ROADS COMMISSION.**NOTICE TO CONTRACTORS.**

Baltimore, Md.
Sealed proposals for building three sections of State Highway as follows:

ALLEGANY COUNTY, CONTRACT No. A-18: One section of State Highway on the Legislative Road between Morantown and Allegany for a distance of 1.4 miles. (Concrete.)

ANNE ARUNDEL COUNTY, CONTRACT No. AA-19: One section of State Highway on the Mountain Road from end of concrete section to Jacobsville for a distance of 2.14 miles. (Concrete.)

BALTIMORE COUNTY, CONTRACT No. B-38: One section of State Highway at Hereford from the York Road 2.04 miles. (Concrete.)

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Md., until 12 M. on the 31st day of August, 1920, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 16th day of August, 1920.

J. N. MACKALL,
Chairman.

L. H. STEUART,
Secretary.

Bids close September 20, 1920.

Brick Pavement

Vanceboro, N. C.
The Town Council of Vanceboro, N. C., will receive bids at their office at Vanceboro until 12 o'clock A. M. 20th September for approximately fourteen thousand square yards of brick pavement. A certified check for Five Hundred Dollars (\$500) must accompany each proposal as an evidence of good faith. The right is reserved to reject any or all bids. Specifications and other information may be had upon application to the undersigned.

T. S. JACKSON,
Mayor.

R. R. EAGLE, Engineer,
Newbern, N. C.

Bids close September 15, 1920.

Hotel Building

Dawson, Ga.
Estimates are asked from General Contractors on the erection of a 40-room fireproof hotel building in the City of Dawson, Ga. Plans and specifications may be obtained from P. E. Dennis, Architect, Macon, Ga., on request, said request to be accompanied by a remittance of \$25, \$20 of which will be returned to the Contractor when the plans are returned to the Architect.

A quantity survey of the materials required for the building is furnished with the plans.

Bids will be opened at Dawson, Ga., on the 15th day of September, 1920, in the presence of whatever bidders may be on hand.

The owners reserve the right to reject any and all bids or to take the one that seems to them best. For further information address W. H. Locke, Secretary, Dawson Hotel Co., Dawson, Ga., or P. E. Dennis, Architect, Macon, Ga.

Bids close September 6, 1920.

Courthouse

Tunica, Miss.

The Board of Supervisors of Tunica County, Mississippi, will receive bids for the construction of a Courthouse for said County until 1 o'clock P. M. Monday, September 6, 1920, at which time all bids received will be opened and considered at the regular September, 1920, meeting of said Board.

Separate bids will also be received on plumbing, electric wiring, heating, electric fixtures, clock and other items, as directed by the architects of the Board, according to the plans and specifications now on file with the Clerk of the Chancery Court of said County.

Each bid must be accompanied by a certified check in the sum of \$1000 to secure compliance with bid. Bond in 100 per cent. of contract price will be required.

Contract will be awarded the lowest bidder. The Board of Supervisors reserves the right to reject any or all bids.

Plans and specifications are on file in the office of the Chancery Clerk of Tunica County, Miss., and will be issued from the office of Frank P. Gates Company, Architects and Engineers, Clarksdale, Miss. A deposit of \$10 is required on receipt of plans and specifications, to be returned when said plans and specifications are returned to the Architect's office.

Witness my signature and seal of office, this 5th day of August, 1920.

L. C. SHANNON,
Chancery Clerk.

Bids close September 7, 1920.

Freight Shed Extension

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans, at their office, Suite 200, New Court Building, until 8 P. M. o'clock Tuesday, September 7, 1920, and then publicly opened, for the furnishing, or for the furnishing and erecting, of all the structural steel required for the "Poydras Street Freight Shed End Extension."

A deposit of \$800 in cash or certified check is required with proposal.

Bond of \$25,000 is required with notarial contract.

Payments—\$5 per cent. of the amount of the contract price bid will be paid on delivery and acceptance of the material on the building site. The balance will be paid upon the completion of the erection. Should the completion of the erection, through no fault of the contractor, be delayed six months after the said delivery and acceptance, interest at the rate of 5 per cent. will be paid thereafter to the contractor on the unpaid balance, all conditions of these specifications having been adhered to.

Plans and specifications are on file in the office of the Chief Engineer, Arsene Perillat, by whom full sets will be furnished to prospective bidders on deposit of \$10, which will be refunded to depositors who submit proposals and return set in good condition.

The right is reserved to reject any or all bids and to waive informalities.

W. O. HUDSON,
President.

Bids close August 31, 1920.

Freight Shed Side Extension

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans, at their office suite 200 New Court Building, until 8 P. M. o'clock Tuesday, August 31, 1920, and then publicly opened, for the furnishing or for the furnishing and erecting of all the structural steel required for the "Poydras Street Freight Shed Side Extension."

A deposit of \$500 in cash or certified check is required with proposal.

Bond of \$20,000 is required with notarial contract.

Payments—75 per cent. of the bid for material will be paid upon delivery and acceptance of same on the site. The balance will be paid upon completion of erection.

Plans and specifications are on file in the office of the Chief Engineer, Arsene Perillat, by whom full sets will be furnished to prospective bidders on deposit of \$10, which will be refunded to depositors who submit proposals and return set in good condition. The right is reserved to reject any or all bids and to waive informalities.

W. O. HUDSON,
President

Bids close September 28, 1920.

High-school Building

Bay Minette, Ala.
Sealed bids will be received by the Building Committee for the erection of the Baldwin County High-school Building in Bay Minette, Alabama, until 10 A. M. September 28, 1920. Plans and specifications may be seen at the Baldwin County Bank Building by applying to W. D. Stapleton, Chairman, Bay Minette, Ala.

A certified check of \$500 must accompany each bid.

Right is reserved to reject any or all bids.
W. D. STAPLETON,
Chairman.

Bids close September 15, 1920.

Water-works Improvement

Lawrenceburg, Ky.
Sealed proposals will be received for the materials and labor in connection with the

above work by the Mayor and Board of Council of the City of Lawrenceburg, Kentucky, until 7 o'clock P. M. September 15, 1920, when they will be opened and publicly read.

The water-works improvement contemplated consist of the installation of a pressure filtration plant and appurtenance; also the erection of a building to house same.

Bids will be entertained separately upon the two sections into which the work is divided, that is a general contract covering the construction work (building, foundations, etc.), and another contract covering the filter and appurtenances.

Plans and specifications may be examined at the office of the Chairman of the Water-works Committee. Prospective bidders may procure plans and specifications by addressing the above and making a deposit of \$25, which deposit will be refunded upon the return of the plans and specifications in good condition within 10 days after the date of closing of bids.

Each proposal must be accompanied by a

certified check or bid bond in the sum of five (5) per cent. of the amount bid, as evidence of good faith upon the part of the bidder.

The City reserves the right to reject any and all bids or to accept any which may seem to it to be the best interests of the City of Lawrenceburg, Kentucky.

DR. J. L. TALL, Mayor.
B. S. GRIFF, Chairman.

Engineer Wanted

Atlanta, Ga.

First-class experienced highway bridge engineer to take full charge of the bridge work of the State Highway Department of Georgia. Only man experienced in design and construction will be considered. Apply to W. R. Neel, State Engineer, 700 Walton Bldg., Atlanta, Ga.



MINERAL AND TIMBER LANDS, WATER POWERS, MISCELLANEOUS PROPERTIES

IRON ORE, TALC, MICA, BAUXITE.
The above mineral properties, all high-grade, near transportation, favorably situated for cheap mining; low freight rates to furnaces and manufactories. Price far below actual values. Terms reasonable. H. L. Davis, 109 E. 7th St., Chattanooga, Tenn.

FOR SALE—80 acres developed zinc mine, equipped with mill; also timber lands; improved commercial orchards in Northwest Arkansas fruit belt; stock and grain farms. Fredericks Realty Co., Springdale, Ark.

LARGE bodies of iron-ore, pyrites, gold and copper lands for sale on easy terms; mineral lands of all kinds, etc. Send for catalogue of farms and mineral lands. Ernest D. Gregory, First National Bank Bldg., Dillwyn, Va.

FOR SALE—Located in Virginia, 220,000 acres hardwood timber land in fee, estimated to cut ten thousand feet per acre average; 50% white and chestnut oak, 15% yellow poplar, balance walnut, hickory and ash. Land underlain with five good seams of coal; large quantities of iron ore, with good prospects for oil. One railroad crosses property, another within three miles. Deal with owner. Price \$15 per acre. Terms may be arranged. W. R. Power, 829 City Bank Bldg., Mobile, Ala.

WATERPOWER

LARGE WELL-SITUATED water-power can be economically developed. For manufacturing or electrochemical plant. Address P. O. Box 73, Hot Springs, N. C.

CLAY PROPERTIES

LARGE BRICK CLAY PROPERTY.
Favorably located directly on railroad and on bricked highway, eight miles west of Newbern, N. C.; adapted for high-grade brick, tile and other clay products. Has been examined and recommended by an eminent engineer as being unusually meritorious. Report will be furnished to interested parties. Owner will accept part payment in securities of properly financed and managed company. Thomas B. Hammer, Owner, Philadelphia, Pa.

FULLERS EARTH

FULLERS EARTH PROPOSITION.
1400 acres, with about 60,000,000 tons of earth in sight equivalent to about 27,000,000 tons of finished product; supply practically inexhaustible, located on railroad with sidetrack and platforms for loading. All kinds of machinery, grinders, drykilns, etc., together with houses for about 25 workmen. Everything is in first-class condition, and the plant is being operated daily with an output of about 300 tons monthly, which can easily be increased to 500 tons. Mill is equipped to grind bolt and bag product ready for shipment. To be sold for division. For further information inquire N. D. S., Box 22, Jacksonville, Fla.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 25c. per line; 300 lines, 25c. per line; 500 lines or more, 25c. per line.

SILICA SAND

GLASS SAND FOR SALE.—Unlimited deposit of silica sand suitable for manufacture of glass, etc. Analysis 99% silica. Located 20 miles from Baltimore City on deep water. Mining and shipping facilities most favorable. Will sell or lease on royalty. Apply W. E. Ferguson, 220 St. Paul St., Balto., Md.

IRON ORE

FOR SALE—Large tonnage very rich iron ore; easily mined; close to transportation. C. G. Samuel, Charleston, Tennessee.

LIMESTONE AND SHALE

FOR SALE OR DEVELOPMENT — A1 cement property; abundance limestone and shale, and level land adjoining main lines both Norfolk & Western and Virginian railroads, on eastern edge Pocahontas and New River coal field. Box 531, Beckley, W. Va.

COAL LANDS AND MINES

FOR SALE—Undeveloped coal tracts in Somerset County, Pennsylvania. Principals only, Leo. A. Neubecker, Box 536, Buffalo, N. Y.

FOR SALE—Sixteen thousand acres, located in West Virginia; N. & W. Ry.; 5 seams of coal running from 45 inches to 68 inches, among them the Warfield seam and the Winefried seam. Price and terms very liberal. All information regarding the same will be furnished by T. J. Ewing, Box 443, Catlettsburg, Ky.

I MAKE A SPECIALTY of leases, royalties, production, coal and timber lands and fluorspar properties in Kentucky. Have a fine tract of timber, with mills, etc. Also handle leases in Texas and Louisiana. E. D. Watkins, Oil Producer, Irvine, Ky.

FOR SALE—2500 acres unimproved coal land in tracts, \$5 per acre; has several seams; top dirt; adjacent railroad, mines, gas and oil. Cavanagh, McAlester, Oklahoma.

COAL AND TIMBER LAND COAL AND TIMBER LANDS.

Cumberland County, Tennessee; to close estate; titles good; 70,000 acres in tracts of 2000 to 20,000 acres. E. H. Benoist, 1002 Title Guaranty Bldg., St. Louis, Missouri.

FOR SALE—Several valuable tracts of coal lands and two operating mines in West Virginia at reasonable prices and terms to reliable parties. Edw. L. Reed, Box 867, Pittsburgh, Pa.

TIMBER LANDS WANTED

WANTED—Large tracts of timber lands in North and South Carolina and Georgia, either hard or soft wood. Have several clients for such tracts and am receiving inquiries daily. Prefer tracts direct from owners. Write R. Maury Young, Mechanics' Bldg., Petersburg, Va.

TIMBER LAND

FOR SALE—One of the best timber tracts in Virginia, just come on the market. There are 544 acres in the tract, and it will cut four million feet: 95 per cent. white oak, chestnut oak and red oak; original growth and very thrifty. No better tight-barrel stave proposition in the State. Write us for full particulars and price.

Swartz Bros.,
Fredericks Hall, Va.

PACIFIC COAST—36,000 acres yellow pine, \$2.75 per M. Adjoins U. S. Forest Reserve. 35,000 acres big yellow fir, solid body, over 2 1/2 billion feet, \$2 per M.

8480 acres, 400,000,000 feet yellow fir, \$1.25 per M.; adjoins available U. S. timber. Other tracts, various sizes. Timberland Bureau, Board Trade Bldg., Portland, Ore.

TIMBER

YELLOW FIR TIMBER FOR SALE.

Three hundred million feet yellow fir on 4000 acres of land, besides several million feet of cedar and hemlock in Lane County, Oregon. Timber in solid body. Key to several hundred million feet more. Fir will cut from 45 to 50 per cent. clear lumber. No deep canyons—long gradual slopes. \$1.50 per M. For further details address G. Theden, 454 Security Bldg., Minneapolis, Minn.

LATH AND TOBACCO STAVE TIMBER.

FOR SALE—10,000 to 15,000 cords standing timber on N. S. R. R. near Newbern, N. C. Will sell by the cord with cash advance. Fine opportunity for laths or tobacco stave factories. Thos. B. Hammer, Philadelphia, Pa.

TIMBER FOR SALE.—4900 acres timber rights, with 17 years for cutting. Estimated to contain 52 million feet; 10 per cent. cypress, 10 per cent. yellow poplar, 20 per cent. gum, 60 per cent. pine. Located on Southern Railway at Springfield, S. C. Easy terms to reliable operator. W. L. Clement, Trustee, 601 Magnolia St., Greensboro, N. C.

TIMBER

IF YOU are in the market for good pine timber, well located in North Carolina, communicate with James & James, Inc., Southern Building, Wilmington, N. C.

LUMBER

LUMBER, LATH AND SHINGLES.
Dressed stock, framing in mixed cars or housebills at 25% under your local prices. Let me quote you on your needs.
Stuart R. Greiner, Inc.,
Perry, Florida.

FARM AND TIMBER LAND
FOR SALE.

10,000,000 feet timber: 75 per cent. pine, 15 per cent. cypress, 10 per cent. gum, oak and ash; finest kind of pine and cypress. Will sell mill, shanties, team and all equipment; located in Northampton County, Va., 3 miles from Virginian and Southern Railroads. Five to 10 years' time. Price and terms reasonable.

3,250,000 feet timber on 300 acres of land in fee, 3 miles from A. C. L. R. R. in Greene County, Va., 33 per cent. fine cypress, 33 per cent. fine gum, 15 per cent. pine, 19 per cent. oak, ash and poplar. Price, \$10,000.

520 acres farm and timber, 2½ miles of N. & W. R. R. in Isle of Wight County, Va.: 1,000,000 hardwood, 500,000 saw pine, 300 acres fast growing stove-size pine, 100 acres of cleared land under cultivation, 2 houses and several outbuildings. \$12,000. Owner selling, B. Hampton Ellington, Kenly, North Carolina.

WRITE for free Mississippi map and list of improved black land farms. Also wholesale cut-over and timber tracts for sale. Southern Land & Timber Co., Box 843, Meridian, Miss.

FOR SALE—160 acres of land in Pasco Co., Fla. Most of it high pine land, with oak; some low. Timber on it of pine, oak and cypress. Valuable. Fine for farming, trucking and orange land. Ideal for stock farm. 1½ miles from the depot at the village of Richland, Fla., on Atlantic Coast Line R. R. Methodist church; new brick school building; graded school at Richland. 7 miles from Dade City, the county-seat. 5 miles from Zephyrhills. 35 miles from Tampa. ¼ of a mile from river. Tides clear. Taxes paid. Fine investment. Price \$40 per acre. Owner, Mrs. Gilbert A. Evans, Sutherland, Fla.

FRUIT, FARM AND TRUCK LANDS

ALABAMA

WE HAVE FOR SALE some of the best farms on Sand Mountain at reasonable prices. Well located, convenient to schools, etc. Further information, address North Alabama Land Co., Valley Head, Ala.

ARIZONA

FOR SALE—1220-acre ranch in San Rafael Valley, Arizona, garden spot of the State; deed land, all fenced; two good houses; six wells and windmills; fine Gramma grass, orchard, farm machinery, etc.; 300 acres in cultivation. Price, \$30 per acre. Bargains in several smaller ranches. Patagonia Land Co., Patagonia, Ariz.

DISTRICT OF COLUMBIA
GENTLEMAN'S COUNTRY
ESTATE BARGAIN.

Beautiful colonial center-hall type house. First floor—Living-room, music-room, library, dining-room, butler's pantry, kitchen and extra lavatory. Second floor—Five master bedrooms, two tiled baths. Third floor—Three bedrooms and bath. Six open fire places; large double porches on two sides; hot-water heat; hardwood floors; gas; electricity; 10 acres; lawn; tennis courts; rose garden; kitchen garden; garage for three cars; chauffeur's quarters; stable; chicken-house; carriage-house; 100 fruit trees; grape arbor; wonderful trees and shrubbery, hedges. Thirty minutes to Treasury by trolley; 20 minutes by automobile over macadam roads.

Liberal terms if desired.
Will consider an exchange.
O. B. ZANTZINGER,
Washington, D. C.

ARKANSAS

FOR SALE—First-class combination farm of 250 acres, 50 acres in permanent pastures; conveniently located; short walk into town. Arkadelphia is now spending half million dollars on her colleges. Write for particulars. Arkansas Land Co., Arkadelphia, Ark.

FLORIDA

ISLAND ESTATE COAST OF GEORGIA.
Atlantic Ocean one side, Frederica River on other, in sight of Jekyll Island, owned by the wealthiest club in the world; nearly 3000 acres, 400 under cultivation, remainder old rice fields, marsh and pasture; plenty of woodland and a magnificent grove of old live oaks. All the year climate unsurpassed on this continent. Colonial house, 12 rooms; wide verandas; all conveniences; private water system; one 8-room house; 8 other houses of 5 to 6 rooms each; large barn, dipping vat, blacksmith shop, garage, storehouse, wharf, private landing, with 35 feet of water; 5 tenement-houses, school-house; about 5 miles hogproof wire fencing; about 90 head of cattle, 200 hogs, 8 mules, several wagons, ample supply of farm machinery of all description, together with crops now growing on the place. Crops, hogs and cattle will sell for \$20,000 at harvest time. Property once sold for \$275,000, and has been recently appraised at \$125,000. Must be sold at once. For further information inquire N. D. S., Box 22, Jacksonville, Fla.

SUGAR LAND—20,000 acres best sugar-cane land in Florida. Deep, rich muck; rail and water transportation; protected on north by 15-mile-wide lake, insuring 365 days growing season. Price, \$12 per acre; terms. Write for description. R. G. Tonkin & Co., Arcadia, Fla.

FLORIDA investment openings. Manatee County; cane, rice, potato, pasture lands; truck farms, citrus fruit groves, subdivisions, hotel site. Owner, F. C. Armstrong, Terra Ceta, Fla.

GEORGIA

GRAND OLD PLANTATION, settled before the Civil War; 2500 acres, middle Georgia; all level and no waste lands; well worth \$100 an acre. Price now \$40; half well improved; two miles railroad, on highway and public roads, all over farm; equipped and going; plenty timber; will sell 20 mules, hogs, cows, sawmill, all farm implements and equipments; well worth \$20,000, for \$15,000. The timber will improve all this and pay expenses and make money for the owner. This is one of the best propositions in the South. W. J. Norris, Atlanta, Georgia.

THE BEST hog and cattle ranch in Georgia, 360 acres on river, 4 miles good town and railroad; on public road; 150 acres in cultivation, as fine as man ever looked at; make 100 bu. corn to acre and velvet bean besides; fine eight-room house; plenty timber to improve the rest and more; fine spring and wells at home. Price, \$15,000; worth twice this money. W. J. Norris, Atlanta, Ga.

WINTER HOME IN SOUTHERN GEORGIA—Eleven hundred acres, 3½ miles from Valdosta, on National Highway. Nice home, with modern improvements; splendid hunting ground. Farm will make place self-sustaining. This place is cheap at \$100 per acre. Look it over or write for full particulars. J. J. Newman, Valdosta, Ga.

335 ACRES in Lovett, Ga.; from 800 to 1200 pounds very best grade of bright tobacco, now growing and being gathered; one bale per acre of staple cotton that is selling for \$1.20 per pound; well adapted to cotton, corn, peanuts, potatoes, beans, etc.; best and most comfortable dwelling in good banking town; two good barns; seven 2, 3 and 4-room tenant-houses, \$100 per acre, \$50 acres near Atlantic coast, on main line Seaboard R. R. with flag station and side-track on property. This is one of the famous old plantations of slavery days; 120 acres perfectly adapted to rice, cane or sea-island cotton; magnificent grove of stately water oaks, largest in State; artesian well, with so strong a natural flow as to raise itself 20 feet; land well drained, rich and productive; fine for standard truck crops; 450 acres open and fenced; unlimited possibilities for hog and cattle growing; practically no buildings, but is dirt cheap at \$40 per acre. J. P. Mathews, Lovett, Ga.

MARYLAND

100-ACRE dairy farm, including stock implements, growing crops; on electric line between Baltimore and Washington. Possession given 30 days. Price, \$12,500. Apply Chas. H. Heintzman, 922 South Charles Street, Baltimore, Md.

MARYLAND

5 PROFITABLE
FARMS FOR
SALE.

NUMBER 1—245 acres, with 20,000 apple and peach trees, mostly 9 years old; good buildings. This farm has at least 10,000 worth of equipment and livestock and easily a \$10,000 crop of fruit this year. Price, complete and immediate possession, \$85,000. This is undoubtedly the best young apple ranch in the Blue Ridge Mountains, only 60 miles from Washington and one mile to railroad.

NUMBER 2—The ALTAMONT, 130 acres, 8000 apple and peach trees, mostly 9 years old. Livestock and all equipment and this year's crop; everything complete, \$23,000. Immediate possession; 60 miles from Washington, located on top of Blue Ridge Mountains, affording a beautiful view of the Shenandoah and Cumberland Valleys. This year's crop worth at least \$7500.

NUMBER 3—215 acres; has around 10,000 peach trees, and have just sold this year's crop for \$36,000. Elegantly located in a rich farming section. A \$10,000 barn is now being erected. Price, \$50,000. Possession April 1, 1921.

NUMBER 4—171 acres, 130 acres farm land, balance timber; good buildings, big crops, a big, profitable dairy now in operation. Located one mile from Blue Ridge Summit, and ideal spot for fruit. Price, \$15,000. Possession April 1, 1921.

NUMBER 5—The best 125-acre farm in Washington County, Maryland, modern brick house and buildings, State roads. Price, \$25 per acre.

Also a number of small and cheaper farms.
Write me your wants.
LAUNCELOT JACQUES, SR.,
Smithburg, Md. Phone 46.

MARYLAND FARMS.—Water-front estates, homes, farms and game preserves on the Eastern and Western Shore of the Chesapeake Bay and its tributaries; timber tracts, stock, dairy, truck, poultry and fruit farms. Cat. rep. 21 counties upon request. Chas. H. Heintzman, Real Estate Broker, 922 South Charles St., Baltimore, Md.

NORTH CAROLINA

VIRGIN LAND FOR SALE—Especially suited for tobacco, cotton, corn or any other crop that grows, located in the richest land section in the world at the lowest price per acre. This section put North Carolina on the map last year on account of its wonderful crops, making in many instances as high as \$1000 per acre in tobacco. Can furnish in lots of 100 acres up, ready for clearing. Write to Broadus & Ives Lumber Co., New Bern, N. C.

SOUTH CAROLINA

1700 ACRES FOR SALE.
Situated about 30 miles from foot of the Blue Ridge Mountains, one mile from siding on the main line of the Southern Railroad from Atlanta to Washington, D. C. This is the finest farm for stock raising in the South, as this tract has 6 living streams on it, 200 acres of fine bottom that don't overflow, and will make 50 bushels of corn per acre any year. This is too high up for the boll-weevil, as we raise as much cotton there as you can anywhere; 700 acres in cultivation, balance in fine saw timber and woods; one 2-story dwelling, with a 20-stall barn and 8 tenant-houses on this tract. This place is cheap at 100 per acre, but for quick turn you can buy it for 60 per acre, with good terms. H. G. Love, Anderson, S. C.

TENNESSEE

SHELBY COUNTY ACREAGE.
The best general farming proposition in this part of the country, being only 8 miles from the city of Memphis and on an inter-urban car line. Price as a whole, 369 acres for \$60,000, on long time. For particulars and full detail write R. E. Ellis, P. O. Box 1262, Memphis.